

NUMBERS & ODDITIES
a.k.a. the Spooks Newsletter
Edition #124, December 2007

EDITOR: Ary Boender ary@luna.nl

Check for previous newsletters, info, sound samples and databases also

NUMBERS & ODDITIES <http://www.ary.luna.nl>

ONLINE DATABASE <http://www.spynumbers.com/numbersDB/>

It's 14.51 hours local time on December 31st when I write this. I hear early fire cracker noise and Radio 2 is playing the Top 2000 of all times (a Dutch end-of-the-year tradition). The year is almost over. Not a very good one for me personally. Radio wise also not one of the best years. The often poor conditions on HF forced me to tune in to VHF/UHF, which was nice for a while. I discovered a number of new stations, so that was ok.

UDXF is still growing. Founded in late March 2006, we now have 1812 members. Not bad at all. I would like to thank all contributors to N&O. Without your input N&O would not exist.

Recently I asked you if I should change the format from plain text to MS Word or PDF. I received 5 reactions and decided to stick to the plain text format.

I have included the N&O 2007 index in this issue.

Finally, I wish all of you A HEALTHY AND DX-FULL 2008 !!!

★ VOICE STATIONS ★

::: E03 - LINCOLNSHIRE POACHER

E03 ID-list December 2007 - phase 1:

UTC	Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC
1200	87826	87826	87826	87826	87826	87826	87826	1200
1300	24639	24639	24639	24639	24639	24639	24639	1300
1400	93532	48996	75740	13085	87826	90421	82006	1400

11111	39498	37527	62586	44022	24750	19486	17709	21810	36289
87715	68934	28886	33298	18974	77919	89732	93784	36291	49904
75840	07958	79101	15843	35448	08463	45655	35360	03319	67755
67120	37269	59787	51972	38815	65620	12604	16944	31944	85044
12037	41203	21025	45819	32073	75662	79848	79192	22988	57661
44938	86144	71847	93093	62464	02328	07618	30410	94596	73087
37462	11656	11823	32658	83603	70306	83227	23453	17981	22620
88258	06509	91887	40236	63110	91103	71453	63946	84756	96809
57550	66416	61596	97208	84802	06837	40401	52242	86444	11111

::: V02a

Date: Tuesday, 11 Dec. 2007. Time: 1900 UTC. Frequency: 12180 kHz.
"Attencion xxxxx xxxxx (NO 9's) 20888 (NO 9's)". New voice.

<<<<<<<<<-0-0-0-0-0-0-0-0-0-0->>>>>>>>>>

A long report this time. In N&O #122 I wrote that V26 and M89 are most likely family.

1. It uses the same call-up procedure.
2. It always uses Chinese in the ending, indicating EOM.
3. There is always 4+4 (QPSK/75Bd) traffic on USB.
4. V26 message is always on LSB.
5. Both traffic is sent at the same time."

1) M89 station 28-01-2003 2142 UTC 6651 kHz:
v gkvz gkvz gkvz de q7nw q7nw (rptd)
nr 7 ck 3t1 73 t128 174t =

tuta a5u5 76n4 n5nt 4td7 6u43 u3nt 6nad tt73 ttttd ...

2) M89 variant: 01-03-2003 0000 UTC 8803 kHz:

vvv cq cq cq de 3sy 3sy 3sy msg (rptd)
ga
nr o481 ck 84 35 o4o1 o7oo = =
tta 3u4 3a4 tau 773 ta7 773 tad 773 353 ...

3) V26 20-05-2002 2340 UTC 16664 kHz:

bnaa bnaa bnaa de xsa xsa v (rptd)
hr msg
nr 042 52 35 0521 0730
202 021 324 314 002 773 357 411 340 532 ...

4) usual hand send cw Chinese mil station 24-01-2007 0148 UTC 5483 kHz:

rty6 rty6 rty6 de cfde cfde k
<skip>
nr 3t93 ck 85 31 t124 1ttt k
u4ta u64n 6nd7 6a37 dt46 7536 76a4 dt3a 3d7a t64d ...

5) usual telephone (OM/CC) Chinese mil station 29-01-2003 1255 UTC 10891 kHz:

... wo shi 3701 (this is 3701)
haoshu 0321 zushu 42 35 0129 1604
8472 6582 3211 0887 0017 3287 8246 9511 8784 2583 ...

6) usual RTTY 50/1000 Chinese mil station 01-07-2007 0955 UTC 10939 kHz:

8253 499 75 0701 0908
0552---0558
5368 9543 9016 5421 9847 5134 8624 8093 0338 0025 ...

ALL HEADERS:

Msg nr	Group count	Priority code	Month & day	Time
nr 7	ck 3t1	73	t128	174t
nr o481	ck 84	35	o4o1	o7oo
nr 042	52	35	0521	0730
nr 3t93	ck 85	31	t124	1ttt
haoshu 0321	zushu 42	35	0129	1604
8253	499	75	0701	0908

Igor continues:

"My variant of special phrases which use in V26 transmission (small case letters):

V 4NA4 4NA4 4NA4 44 XSV XSV V 4NA4 4NA4 4NA4 44 XSV XSV
v bnab bnab bnab de xsv xsv (also heard 'xsa', 'xse')

HR MFP 40 7R N044 V7
hr msg to yr note cy

NR1177 60 51 1006 2156
nr1177 ...

965 605 608 007 951 601 016 965 605 700
006 608 610 020 965 605 858 857 939 614
243 615 218 616 935 617 050 625 250 626
110 928 006 811 965 605 658 633 009 246
011 635 422 637 636 614 264 615 210 748
332 342 934 344 939 539 934 533 751 855

MFP APN NR 1177 60 51 1006 2156
hr msg agn nr

965 605 608 007 951 601 016 965 605 700
006 608 610 020 965 605 858 857 939 614
243 615 218 616 935 617 050 625 250 626
110 928 006 811 965 605 658 633 009 246
011 635 422 637 636 614 264 615 210 748
332 342 934 344 939 539 934 533 751 855

AHR MFP PA
ahr msg ga

NR 1176 65 51 1006 1637

965 965 605 608 007 951 601 016 965 965
605 700 005 608 610 014 965 965 605 858
857 939 614 246 615 222 616 930 617 055
625 300 626 110 928 006 811 965 965 605
812 830 633 009 246 011 635 415 637 636
614 263 615 211 748 332 341 934 342 939
539 934 533 751 855

MFP AZN
msg agn

NR 1176 65 51 1006 1637

965 965 605 608 007 951 601 016 965 965
605 700 005 608 610 014 965 965 605 858
857 939 614 246 615 222 616 930 617 055

```
Id "0" : 3561.5, 4082.5, 4577.3, 4851.5, 4951.5
Id "8" : 9278
Id "9" : 6823.5
Unid id: 3322 (defective key caused garbled messages)
```

::: M22

Fritz writes "This station developed a strange behaviour, as it changes one or more of its standard frequencies 2680, 4331 and 6379 kHz to 2679, 4330 and 6380 kHz for one or several days. No idea why, but this is not typical for a Navy station"

::: M51

5231.0	0700	27-11	: M51
2045.0	2244	03-12	: M51
2453.0	2256	03-12	: M51
2599.0	2306	03-12	: M51
3881.0	1232	04-12	: FAV22 ☆)
6825.0	1232	04-12	: FAV22 ☆)
6826.0	1208	07-12	: M51
4004.0	2242	10-12	: M51
4060.0	0330	21-12	: M51
6825.0	0947	23-12	: FAV22
4892.6	2338	26-12	: M51

::: M89

V T3AP T3AP T3AP de QF3K QF3K on 3197.0, 5727.0 kHz

V 7NPE 7NPE 7NPE de QV5B QV5B on 5500.0, 7582.0 kHz

* VARIOUS MODES *

::: X06 & M42

6850.0	2343	30-11	Mazielka
8030.0	1704	25-12	Dep. of State Comms, Moscow. Mode: 32-tone MFSK. Offline crypto traffic to unlocated Russian embassy. Link ID 00189.
8058.5	1706	26-11	Mode: CROWD/USB
8066.4	1740	27-12	Russian diplo. Mode: Crowd-36/40/1500. Encrypted traffic.
8088.0	0935	11-12	Mode: CROWD
8110.0	1252	29-12	Russian Intelligence. Mode: RTTY 200/485. See message below
8110.5	1709	26-11	Mode: CROWD/USB
9340.0	0926	11-12	Mode: CROWD
10127.0	0916	10-12	Mazielka. Sequence: 421635
10335.0	1150	27-12	Mazielka. Sequence: 154632
11538.0	0937	24-12	Mazielka. Sequence: 421635
12120.0	0825	17-12	Mazielka. Sequence: 164253
12122.0	0808	25-12	Dep. of State Comms, Moscow. Mode: 32-tone MFSK. Offline crypto traffic to unlocated Russian embassy. Link ID 00142.
12213.0	0855	14-12	Mazielka. Sequence: 615243
17463.0	0902	31-12	Mazielka. Sequence: 256134
19611.0	0905	31-12	Mazielka. Sequence: 256134
15858.0	0913	31-12	Mazielka. Sequence: 256134

Message sent in RTTY on 8110 kHz:

```
+++++18 =8531
510336871113668123 =8272
0830454425204319 =8733
21119995851901299 =8844
3488875551154003927164 =87439
11533661150000062 )58140
```

```
+++++18 =8531
510336871113668123 =8272
0830454425204319 =8733
21119995851901299 =8844
34888717290110991 =8635
3118051290302292 =8756
998126977433993146 =8017
87442678727357468 =8268
29957727499161659 =8469
```


999883019975584142	=83210
04594961784602155	=86911
618763817456210125	=80812
426515838284369120	=83113
59641861235351064	=83514
92692530405950297	=87315
134978907281428150	=76916
97563948708844135	=80317
464406772601596109	=83418
432974727260605143	=83919
584305697953292132	=81420
567325184339837100	=81821
348629748721551103	=82222
504773221994177105	=85323

Note:

The Mazielka is transmitted in AM.

Tones in Hz: 1 - 841, 2 - 987, 3 - 946, 4 - 874, 5 - 811, 6 - 908

<<<<<<<<<-0-0-0-0-0-0-0-0-0-0->>>>>>>>>>

```

::: SK01 PSK31/RDFT/DRM

```

17435	1700	11-12	RDFT	File 77123548.txt
17345	1700	12-12	RDFT	File assumed to be 1112000.txt
17345	1710	12-12	RDFT	File 1112010.txt
17345	1720	12-12	RDFT	File 1112020.txt
17345	1730	12-12	RDFT	File 1112030.txt
17345	1740	12-12	RDFT	File 1112040.txt content of each file exactly the same
17345	1700	13-12	RDFT	File 85541336.txt brief transmissions every 7-10 mins
17515	1603	17-12	RDFT	Text files
17435	1700	18-12	RDFT	File 231115.txt
17435	1700	19-12	RDFT	Files 231109.txt, 231113.txt, 231114.txt. Same content as 18-12
8180	0800	20-12	RDFT	File transfer
8180	0800	25-12	RDFT	File transfer
7887	2045	30-12	PSK31	PSK220FEC modulated. File transfer (see below)

Sample:

[illegible]

78126356836038650643604326315773438247420448909021
88285337846801346127339522379230557189070204037928
09030224932966586850352215737611757394069077238217
8860490206656469081036882651 (abrupt ending)

★ MILITARY STATIONS ★

::: RUSSIAN, CIS, UKRAINIAN MILITARY SSB & CW STATIONS (including M32)

Again a very long report. I start with comments submitted by Fritz:

"As expected, the deployment of 11 ships of the Northern - and the Black Sea Fleet into the Mediterranean and the North Atlantic early December did not influence the Morse traffic of the CIS Ny. It was business as usual with stations asking for phone patches, online encrypted - or MS-5 traffic.

Apart from the HQ in Severomorsk RIT, in Sevastopol RCV, Kaliningrad RMP, Vladivostok RJS and Moscow RIW the following stations were engaged in December:

Collective Callsigns: RKZ, REO, RBGJ, RJV, RJU57.

Individual Callsigns: RJE56, RMDZ, RBIZ, RJD23, RAL48, RJI63, RMXV, RHY73, RGL93, RKB91, RIE83, RMZW, RMW33, RGZ58, RCRE, RHL80, RCJG, RJT22, RIS96, RJD69, RGV82, RAA (this is a mystery as it used RIW's exclusive QRG 11000 kHz for a message to RMDZ).

The VGK (General Staff) network on 18.1 kHz transmitted at selected times in parallel on 7657, 6342, 14411, 5438, 9044, 8508, 8696, 11468 and 4582 kHz. During the European Daytime up to 5 Strategic Flash Messages could be received. Most of them made RCV on 10201 kHz sending another Flash Message to RJV within 5 minutes. RJV was assumed to be the Strategic Bomber Airfield Tiksi, but in this context RJV rather could be Tartous (SYR).

Examples:

12-12-2007

1353z, 14411 kHz: xxx xxx RKS RKS RDL RDL 06695 29376 twistor 5586 0345 k

1355z, 10201 kHz: xxx xxx RJV RJV 38620 ojskopi% 0075 8089 k

1430z, 14411 kHz: xxx xxx RKS RKS RDL RDL 98937 51046 pri^uxh 2445 ... (QRM) k

1431z, 10201 kHz: xxx xxx RJV RJV 96094 akobo 3168 8963 k

17-12-2007

0930z, 14411 kHz: xxx xxx RKS RKS RDL RDL 61882 15924 provilina 5467 4890 k

0935z, 10201 kHz: xxx xxx RJV RJV 84087 sgorowentoe 1939 2444 k

0945z, 14411 kHz: xxx xxx RKS RKS RDL RDL 87967 67742 papskij 1174 0988 k
 0949z, 10201 kHz: xxx xxx RJV RJV 89943 skolox 9576 3028 k
 1023z, 14411 kHz: xxx xxx RKS RKS RDL RDL 33658 57665 gipologi% 7814 3311 k
 1026z, 14411 kHz: xxx xxx RDL RDL 70183 90705 barsu^ij 7264 8234 k
 1028z, 10201 kHz: xxx xxx RJV RJV 03365 storov 6952 4889 k

Naval Air Transport was heard on 8816 kHz at Dec. 18th:
 Aircraft 09418 to RCB and RJF94: QTR 1015 QRD XMKK XUMO QRE 1415 QBD 1700 k
 RCB and RJF94 acknowledge."

Thanks for the extended report, Fritz. Next are the logs. Most of them were copied by Trond, Alf, Tom, Jim and Peter. Great job, all.

18.1 Russian High Command Moscow, Vileyka Radio centre.
 // 7657, 8130, 9346, 11468, 12741, 13490, 14411
 20.5 RJH66: 338th communications node Kara Balta, Chaldovar Radio centre,
 Kyrgysztan. NON standard frequency transmission (12/dec/2007)
 2736.5 Russian Air Force: REA4
 2843.5 Russian Mil.
 3207.0 CIS Mil: 5J3T
 3217.0 Russian Mil. F2BB sends msg to PR09: "F2BB 722 23 5 0104 722 = ZLB 642
 = TSPHP PPPPP DVHDR ... UCAIB PTP%0 974 K". PR09 QSLs on freq 3393 kHz.
 3354.0 Russian Mil. L9MN comms check with 3SL0, LZ2A and S8AP. All respond
 on QSX freq 2839 kHz.
 3366.0 Russian Mil: DE 7S1Q QTC K"
 3863.0 CIS Mil. VLDK wkg A4CU
 4027.0 Russian Navy: "rif35 rif35 de rjv38 rjv38 qsa 2 qsa ? k"
 "rjv38 rjv38 de rif35 rif 35 qsa ? k"
 4055.0 Russian Navy: RCV. 5FGs "07032" "rjp54 de rcv"
 4397.0 Russian Navy Sevastopol: RCV wkg RHQ33
 4950.5 Russian Navy: RIQ88 wkg RAI62, RAI63
 5127.0 Russian Navy: RIW wkg RMZW "QYT4 QWH 4282 / 11789"
 5171.5 CIS Mil. HPCK QSA check with NZYH and AYDK
 5180.0 CIS Mil. 2GPC QSA check
 5205.5 CIS Mil. K60C QTJ to W7PV
 5409.8 CIS Mil. "QQS NO QQT 057 FM 688 268 FOR 243 687 124 FM 6.. 313 FOR
 599 825 K. AR"
 5418.0 Russian Mil. T5QB with a message to collective EM4Z: "T5QB 563 22 3
 2306 563 = 740 = EDIVV PPPPP BU%ZI ... EEIRA PEP%0 576 K.
 NKLI, JQTP and PO5U QSL on QSX freq 4917 kHz.
 5224.0 Russian Navy: RCV. QTC #523 to RBE63, w/NAWIP bulletin
 5812.0 CIS Mil. "MOMF(x3) de AI03(x2) ZNP ZNB RPT ZNP ZNB K"
 6374.0 CIS Mil. "VVV...V NW(Ya) 91984 2t28t 94837 k".
 6753.0 Russian Military RFF-Net. Msg to RFFR
 6825.0 CIS Mil. "JA?L de 9RJ3 QBE QYT4 OK? K" JA?L responds on freq 6875 kHz
 6836.0 Russian Navy: RWM56 clg RGR49 for "ZSA?"; clg RGR96 "ZTC 11 31 12 1437
 = 430 = 00000 ..." 5LGs.

6850.0 Ukrainian Navy. UWA211 wkg USU8
 6860.0 Russian Navy: RMD99 "... RMD99 TEHNITschESKAYa PROWERKA = 795 =
 XXX XXX RMD99 RMD99 TEHNITschESKAYa PROWERKA = 795 = 0900 ZLN ar"
 6863.0 Ukrainian Navy. URR85 clg USL2
 6868.5 CIS Mil. LWQP wkg ZEYU, A5TJ, VYG6, LOKK "QSA4 FOR QRJ 1 K"
 "QSA2 QAA 1 K"
 6873.0 Russian Navy Kaliningrad: RMP "... 39171 T6T24 RKB91(x3) RK081(x3) de
 RMP(x2) QTC 220 22 7 1443 22t = 11111 10577 ... 39171 T6T24 +"
 6877.0 Russian Mil. "XXX XXX RLO RLO PODAROK 01 1310 315 090 1502"
 6220.0 Russian Mil. Msg for 8JLU: "2JV8: 454 204 0108 454 = ZQV 354 = %%KRP
 PPPPP U%Z^X ... NUQXN PRP%Y 122 K". Then MPAM QTC's ZOCQ with MPAM 584
 22 4 0052 584 = 458 = OZKTS PPPPP ... RPT AL QLN K"
 6753.0 Russian RFF net: RFFN
 7018.0 Russian Air Force: REA4
 7028.0 Russian Mil: LCY9, 2BYP
 7050.0 Russian Mil: RGT77
 7056.0 Russian Mil: E4I4, TSJV
 7099.0 Russian Mil: QYWN
 7044.0 Russian Air Force: REA4
 7066.0 Russian Mil: LLND "qtc 840 2312 250 8406 194 =" + 5FGs
 7088.0 CIS Mil: 4FGs
 7678.0 Russian Mil. 68x5LG traffic ... GXRAV PWXTP PRPYI 353 K"
 "II9P de 7E5U ZVZ ZW0 K. R K"
 7922.0 CIS Mil. "XXX XXX XXX SXT4 94556 AGNOSTIK 8774 4463 K"
 YXPL comms check with MCPY, C23F, 8XQB and IZ7D.
 8120.0 Russian Mil: RJE56 wkg RJD71
 8508.0 Russian Navy: "xxx xxx rks rks rdl rdl 28250 32562 boldyrx 1162 4975 k"

 9483.0 RIT: Russian Navy Northern Fleet "rmzw de rit"
 10388.0 Russian Navy: RIW wkg RIS96. "vvv ris96 ris96 ris96 de riw riw zzd?"
 then RIS96 heard with very strong signal "riw de ris96" and giving
 authentication key ".... odin nolb tudink zkm?" RIW replies and send 25
 letter codekey: "ris96 de riw zdd sgng` zzt llkmvlmmvmlmlkkvkmllvlvlkm"
 10540.0 Russian Navy: RIW wkg RDND. "rdnd de riw zzd3 k" then giving
 authentication key "rn i i i i rdnd de riw zn" odin nolx wosemx zkm?"
 11000.0 Russian Navy: RIW.
 "rie83 de riw" "qsu1 qwh97tt" "rie83 de riw k riw qtc k riw 337 25 5
 12t5 337 = 822 = ppp egp wlgzb `h`jc u, riw rpt"
 RAA clg RMDZ, RJE56 clg RMDZ, RIW QSO RMDZ, asking for phone tfc.
 Navy HQ using strange callsigns: RAA is unid, RJE56 is CIS Navy
 individual c/s.
 "rdnd de riw qrr3 qdw 1t54t k" (12/dec/2007)(TJ)
 " ... t29 22t = sm1 fm rit = 11111 t4122 44t5 ... 5t962 13t22 ar riw k"
 "ris96 de riw k" "riw qrr3 qdw 1t388 k"
 "rgr70 de riw qsu1 qwh13086 qsx 12260 k"
 RIW clg RHL80 who responded after ca 15 min.
 11468.0 Russian High Command Moscow, unid tx site. "rdl rdl rdl 17744 18718
 17744 18718 17744 18718 k" // 18.1, 7657, 8130, 9346, 12741, 14411 kHz.

11155.0 RIT: Russian Navy Northern Fleet: "rmzw de rit qrr3 qsx9483 ok?"
"rji63 rji63 rji63 de rit rit qrr3 qdw 7549 ok? rit r k"
"ral48 ral48 ral48 de rit rit qsa + k" later commchecks with RMXV
13086.0 Russian Navy HQ in qso with warship RGR70. USB very weak Russian voice,
several "reprim (?)" and several "priyom"
14092.0 Russian Mil: "XXX RGT77 KFDP 67401 densimeter K"
14556.0 Russian Navy: RIW clg RMXV

There was an interesting discussion on UDXF about how to identify Russian or other CIS transmissions. The subject has been discussed before but not as detailed as this time. See below. Comments are most welcome!!!

It started with this note from Tom.

"I was asked last week about "how to differ" RUS from UKR Military of these CW QTCs. Therefore, according to my understanding (correct ?) here is an example the QTC on 3299 kHz received at 2012 UTC (see below):

03299 kHz. DK7S: Russian Military 2012 CW 5LGs QTC to KTC8
"QTC T12 38 22 2251 T12 = 535 = DDDDD ...". 22Dec07 (ALF)

The time in the preamble is always the time at which the message was written, not the time of transmission. In some cases that could be the same, but you will never hear a "future" message... hi

Preamble: QTC T12 38 22 2251 T12 ...

=> Msg written: 2251 Local Time
=> Msg RX: 2012 UTC => 2112 CET => 2212 UKR => 2312 Moscow Time

If the message would be written by UKR MIL at 2251 Ukrainian local time, that message could be received earliest at 2051 UTC. (2251 Moscow time -> earliest possible reception time was 1951 UTC)

Except in the case that the UKR MIL have a time-machine, only the RUS military could be the origin for this (prepared at 2251 local Moscow time) QTC, which was send about 20 minutes later after it was written.

Note: But this ID scheme does not work if the QTC would have been send on the air one hour later, at e.g. 2112 UTC. Than it could mean that

- a) RUS MIL send it 1:20 hours -or-
- b) UKR MIL send it 20 minutes after it was written.

In this case both UKR and RUS could be the origin.

This means that it is only possible to "exclude" the Ukrainian origin of a message. It is not possible to gave any positive ID for UKR MIL at all,

* UTILITY ROUNDUP *

::: CLANDESTINE STATIONS

Mathias Kropf sent me the annual Clandestine Activity Survey:

Press-Release

2007 Clandestine Activity Survey

During the year 2007 the activity of political clandestine stations broadcasting on shortwave has increased by 4.8 % to 1321 Weekly Broadcasting Hours (WBHs). This is way below the record 2384 WBHs measured in 1990, but still up from the all-time low of 1116 WBHs in 1999.

Activity of clandestine stations broadcasting to target areas on the Asian continent has increased by 7.9 % to 939 WBHs and activity to target areas on the American continent has also increased by 11.4 % to 215 WBHs. On the other hand, activity to target areas on the African continent has dropped by 15.2 % to now 167 WBHs.

The three most active target areas worldwide are China with 240 WBHs (+40 when compared with last year), Cuba with 215 WBHs (+22) and North Korea with 196 WBHs (+14).

The number of different target areas active worldwide has dropped sharply from 24 in the previous year to only 18 at the end of 2007. While no new target areas have emerged during the past 12 months, the following target areas that were still active one year ago are now thought to be inactive: Maldives, Libya, Sudan, Uganda, Gambia and Cameroon.

End of Press-Release

<<<<<<<<<-0-0-0-0-0-0-0-0-0-0-0-0->>>>>>>>>>

::: UNID STATION

Heard on 23 and 24-12 by Peter and Ary (both in Holland). Dash on 6878 kHz. Quite strong. All day long and part of the evening. No idea where it's from.

<<<<<<<<<-0-0-0-0-0-0-0-0-0-0->>>>>>>>>>

::: PIRATE BEACON REPORT

3449.59 0K

4077.04 MO
4079.30 TMP39 TMP42 TMP64
4089.00 Dasher
4094.30 PA
4096.30 Hexie
4102.20 W
4102.50 A
4111.60 Florida dasher
6700.20 Dasher
8188.80 W
10237.80 Florida dasher
10245.20 Pike dasher
14417.70 New dasher. Power 100Mw, antenna 100 ft end fed wire,
battery powered, 90 dashes per minute

11 December report:

OK and MO, both located in the heart of the ice storm, have lost antennas.
PA, located in Arkansas, may not be on the air do to cloudy weather for days.

* KNICKEBEIN, X-GERft, Y-GERft *

I recently read about several German WW2 systems that might be of interest to you. During my search for more info, I found Wikipedia items about the subject. I have copied them below and added some info.

KNICKEBEIN

From Wikipedia, the free encyclopedia

Knickebein (German for "crooked leg", but also the name of a magic raven in a German fairy tale) was a radio navigation system used by the Luftwaffe early in World War II to aid bomber navigation. It was replaced with the X-Gerft system.

Lorenz directed an aircraft down a line, so two crossed beams could be used to fix a single spot. Several systems based on this idea were studied through the 1930s. Lorenz had a range of about 30 miles, enough for blind-landing but not good enough for bombing raids over England. In addition the beams of Lorenz were deliberately set wide enough that they could be easily picked up at some distance from the runway centerline, but this meant their accuracy at long ranges was fairly limited. This was not a problem for blind landing, where the distance covered by the fan-shaped beams decreased as the airplane approached the transmitters, but for use in the bombing role this would be reversed and the system would have maximum inaccuracy over the target.

For bomber use the modifications to Lorenz were fairly minor. Much larger

antennas with considerably smaller beam angles were set up, and broadcast power was increased considerably. The first two of these new Knickebein transmitters were set up in northern Germany near the border with Denmark, and another to the south near France. The two beams could be pointed to cross over the target, and the bombers would fly into the beam of one and ride it until they started hearing the tones from the other (in another radio). When the steady "on course" sound was heard from both radios, they dropped their bombs. Using Knickebein required nothing more than the installation of a second Lorenz receiver.

Knickebein was used in the early stages of the German night-bombing offensive, and proved to be fairly effective. However the tactics for using the system in a widespread bombing effort were not yet developed, so much of the early German night bombing offensive was limited to area bombing anyway.

Efforts in England to stop the system took some time to get started. British intelligence at the Air Ministry, led by R. V. Jones, were aware of the system due to a number of intercepts and captured documents from downed bombers. However many in the Air Ministry didn't believe they used such a system, and Lindemann claimed that any such system would not be able to follow the curvature of the Earth anyway. Both claims were proven untrue when one enterprising British intelligence officer flew a light plane equipped with an amateur radio into one of the beams and picked up the signals. At this point the same sceptics then started pooh-poohing the system as proof that the German pilots weren't as good as their own, who could do without such systems. However it was Lindemann himself who proved this wrong, when his "photoflash" systems started returning photographs of the RAF bombing raids, showing that they were rarely, if ever, anywhere near their targets.

Efforts to block the Knickebein were brilliant in their simplicity. On nights where raids were going up, local radio transmitters broadcast the "dot signal" at low power. This meant that as the bombers flew over England, almost any point at all would make the "on course" steady signal, and the planes would drift far to the left of their line. The crews knew something was wrong, but the nature of the problem was a mystery. Eventually a German radio engineer flew on one mission and, finding himself many miles from the target, concluded that the British had invented a system for bending the radio beams. They gave up on Knickebein soon after.

Knickebein used frequencies in the range: 42.1-47.9 MHz.

Stations:

- K01 - Norway: Klepp (just south of Stavanger)
- K02 - Germany: Bredstedt (Stollberg)
- K03 - The Netherlands: Huisduinen/Julianadorp
- K04 - Germany: Kleve (Klever Berg)
- K05 - The Netherlands: Bergen op Zoom
- K06 - France: Mont Violette (Pas-de-Calais)
- K07 - France: Greny (Haute-Normandie)

- K08 - France: Mont Pinçon (Normandie)
K09 - France: Beaumont-Hague (Normandie)
K10 - France: Sortosville-en-Beaumont (Normandie)
K11 - France: St-Fiacre (Bretagne)
K12 - Germany: 8 km east of L[^]rrach
K13 - Italy: Noto (Sicily)

<<<<<<<<<-0-0-0-0-0-0-0-0-0-0->>>>>>>>>>

X-GER_{FT}

From Wikipedia, the free encyclopedia

X-Gerät, also known as Wotan I, was a radio navigation system used by the Luftwaffe early in World War II to aid bomber navigation. It was preceded by the Knickebein system and was replaced with the Y-Gerät system.

The previous system used by the Luftwaffe called Knickebein was never invented to be used in the long-range role. Efforts had been underway for some time to produce a much more accurate version of the same basic concept, which was eventually delivered as X-Gerät (X-gadget).

X-Ge%t used a series of beams to locate the target, each beam named for a river. The main beam, Weser, was similar in concept to the one used in Knickebein, but operated at a much higher frequency. Due to the nature of radio, this allowed its two beams to be pointed much more accurately from a similarly sized antenna, the equi-signal area being only about 100 yards wide at 200 miles from the antenna. The beams were so narrow that a lower power set of beams with a much wider pattern was used to allow the bombers to find the main beam. The main Weser system was set up just to the west of Cherbourg.

The "cross" signal was different in X-Gerät. It used a series of three very narrow single beams, Rhine, Oder and Elbe. About 30 km from the target the radio operator would hear a brief signal from Rhine, and set up his equipment. This consisted primarily of a stopwatch with two hands. When the signal from Oder was heard the operator started the clock and two hands started to sweep up from zero. When he heard the signal from Elbe he "started" the clock again, at which point one hand would stop and the other would start moving back towards zero. Oder and Elbe were aimed to be at exactly 10 and 5 km from the bomb release point at the line of Weser, meaning that the clock accurately measured the time to travel 5 km, and thus calculated the ground speed of the plane. Since the time taken to travel that 5 km should be almost identical to the time needed to travel the last 5 km from Elbe to the target, when the moving hand reached zero the bombs were automatically released.

Accuracy of X-Gen was considerably better than Knickerbein, but as it operated on completely different frequencies it required new radio equipment to be used. There was not nearly enough to go around, so instead the experimental unit KG

100 was given the task of using their sets in order to guide other planes to the target. To do this KGr 100 planes would attack as a small group first, dropping flares which other planes would then see and bomb visually. This is the first use of the pathfinder concept that the RAF would later use to great effect against the Germans only a few years later.

X-Gerät was used to great effect in a series of raids known to the Germans as Moonlight Sonata, against Coventry, Wolverhampton and Birmingham. In the raid on Birmingham only KGr 100 was used, and British post-raid analysis showed that the vast majority of the bombs dropped were placed within less than 100 yards of the midline of the Weser beam, spread along it a few hundred yards. This was the sort of accuracy that day bombing could barely achieve. A similar raid on Coventry with full support from other units dropping on their flares nearly destroyed the city center.

Stopping X-Gerät proved to be more difficult than Knickebein. The system operated at unknown frequencies until an X-Gerät equipped Heinkel He 111 ditched on the English coast. Defences against the system were soon developed in a similar fashion as Knickebein, but proved to be unreliable. It was later learned that a new pointing device was being used that automatically decoded the dots and dashes and displayed a pointer in the cockpit in front of the pilot. This device was sensitive to the frequency of the beeps, and the early British signals didn't bother matching this accurately. X-Gerät was eventually also defeated in another manner, a "false Elbe" was set up to cross the Weser guide beam not at 5 km, but at 1. Since the final stages of the release were automatic, the clock would count a very fast "5 km" and then drop the bombs kilometers short of target.

X-Ge³⁺ used frequencies in the following range: 66.5-75 MHz.

Stations:

- ```
X01 Code: "Donau" in Julianadorp (The Netherlands)
X02 Code: "Rhein" in Griz Nez (France)
X03 Code: "Oder" in Griz Nez (France)
X04 Code: "Elbe" in Griz Nez (France)
X05 Code: "Weser" in Cap de la Hague (France)
X06 Code: "Spree" in Cap de la Hague (France)
X07 Code: "Isar" in Sud Morlaix (France)
X08 Code: ??? in La FeuillÈe (France)
```

<<<<<<<<<-0-0-0-0-0-0-0-0-0-0-0->>>>>>>>>>

Y-GER<sub>FT</sub>

From Wikipedia, the free encyclopedia

Y-Ge<math>t</math>, also known as Wotan II, was a radio navigation system used by the Luftwaffe in World War II to aid bomber navigation. It was preceded by the

X-Gerät system.

As the British slowly gained the upper hand in the Battle of the beams, they started considering what the next German system would be like. With the standard beam systems clearly no longer of any use, some sort of entirely new system would have to be developed. It was thought that if they could defeat this new system, whatever it was, very quickly, the Germans would give up on the whole idea in frustration.

They soon started receiving intercepts referring to a new device known as Y-Gerät, which was also sometimes referred to as Wotan. R.V. Jones had long realized that the Germans used code names that were far too literal. Asking around he learned that Wotan was the name of a one-eyed God. Based on nothing more than this, he assumed that Y-Gerät used a single beam. From this they thought up systems that could use a single beam, and concluded that Wotan would have to be based on a distance-measurement system. Perhaps shockingly, the guess was exactly correct.

Y-Gerät used a single narrow beam from the ground station pointed over the target, broadcasting a series of "pulses". A new piece of equipment in the bomber was required for the system to work; it received the pulses from the beam and immediately re-broadcast them, where they were picked up at the original station. By listening for the return pulses, the distance to the plane could be calculated with fairly good accuracy. The planes did not have to "fly the beam", ground controllers would plot the position of the plane and give instructions over radio to correct their path. A downside was that only one plane could be guided at once.

The British were ready for this system even before it was used. As soon as they realized it was in use, they set their plan in motion: broadcasting random "return" pulses from BBC radio transmitters. The German ground stations received several pulses for every one sent, and had no idea which was the "real" one. They gave up on this system after only a few small raids, considering the British to be "way ahead" and any further radio navigation systems hopeless.

Y-Gerät used frequencies in the range: 42-48 MHz.

Stations:

- Y01 Code: "Berta" in Cassel (France)
- Y02 Code: "Gustav" in Boursin (France)
- Y03 Code: "Cicero" in Conterville (France)
- Y04 Code: "Dora" in St-Martin-aux-Buneaux (France)
- Y05 Code: "Anton" in Jobourg (France)
- Y06 Code: "Emil" in Morlaix (France)
- Y07 Code: ??? in Cap de la Haque (France)
- Y08 Code: ??? in La FeuillÈe (France)
- Y09 Code: ??? in Aumale (France)

-----

\* LOGS SECTION \*

|        |      |                                                                                                                                         |
|--------|------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 2045.0 | M51  | Mode: CW Date/time: 3-12-2007, 2244 UTC<br>Remarks: 5LGs Contr: (SW2)                                                                   |
| 2426   | M01b | Mode: CW Date/time: Mon 17-12-2007, 2015 UTC<br>Remarks: 375 976 33 Contr: (FN)                                                         |
| 2427   | M01b | Mode: CW Date/time: Mon 10-12-2007, 2019 UTC<br>Remarks: 175 976 33 Contr: (FN)                                                         |
| 2453.0 | M51  | Mode: CW Date/time: 3-12-2007, 2256 UTC<br>Remarks: 5LGs Contr: (SW2)                                                                   |
| 2599.0 | M51  | Mode: CW Date/time: 3-12-2007, 2306 UTC<br>Remarks: 5LGs Contr: (SW2)                                                                   |
| 3197   | M01b | Mode: CW Date/time: Fri 14-12-2007, 2004 UTC<br>Remarks: 866 976 33 Contr: (FN)                                                         |
| 3197   | M89  | Mode: CW Date/time: Sun 16-12-2007, 1935 UTC<br>Remarks: v T3AP T3AP T3AP de QF3K QF3K Contr: (FN)                                      |
| 3230   | E10  | Mode: AM Date/time: 5-12-2007, 2008 UTC<br>Remarks: in progress Contr: (MUK)                                                            |
| 3292.0 | M08a | Mode: AM Date/time: Sat 29-12-2007, 0420 UTC<br>Remarks: Starting at approx. 0435 some type of jammer or modulated signal. Contr: (RCh) |
| 3322   | M21  | Mode: CW Date/time: 21-12-2007, 2017 UTC<br>Remarks: PVO ID 0 time strings, def. keyer Contr: (FN)                                      |
| 3323.0 | S21  | Mode: USB Date/time: Tue 11-12-2007, 1842 UTC<br>Remarks: 323 Contr: (HFD)                                                              |
| 3561.5 | M21  | Mode: CW Date/time: 14-12-2007, 0149 UTC<br>Remarks: PVO/Russian Air Defence. =99t449??t????<br>Contr: (ALF)                            |
| 3756   | S30  | Mode: CW Date/time: 1-12-2007, 0308 UTC<br>Remarks: The Pip Contr: (MUK)                                                                |
| 3840   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1700 UTC<br>Remarks: YHF2 Contr: (FN)                                                                |
| 3845.0 | G06  | Mode: AM Date/time: Mon 3-12-2007, 2000 UTC<br>Remarks: 308-456/53=61562 Contr: (HFD)                                                   |
| 3870.0 | S06  | Mode: AM Date/time: Sat 22-12-2007, 1600 UTC<br>Remarks: 754:0 exact 3870,2 kHz Contr: (HFD)                                            |
| 4004.0 | M51  | Mode: CW Date/time: 10-12-2007, 2242 UTC<br>Remarks: French Mil CW training Contr: (Jon-FL)                                             |
| 4028.0 | V02a | Mode: LSB Date/time: Fri 28-12-2007, 0100 UTC<br>Remarks: A 65110 (NO-9) 83787 (NO-9) 54362 (NO-9)<br>Contr: (Jon-FL)                   |
| 4035.0 | V02a | Mode: AM Date/time: Mon 31-12-2007, 0400 UTC<br>Remarks: A 08104 00234 52564 Contr: (Jon-FL)                                            |
| 4060.1 | M51  | Mode: CW Date/time: 21-12-2007, 0330 UTC<br>Remarks: French Mil. CW training Contr: (Jon-FL)                                            |

|        |      |                                                                                                                                               |
|--------|------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 4082.5 | M21  | Mode: CW Date/time: 25-12-2007, 1944 UTC<br>Remarks: PVO ID 0 =992244??0????? Contr: (FN)                                                     |
| 4153.0 | XSL  | Mode: PSK Date/time: 12-12-2007, 0648 UTC<br>Remarks: Japanese PSK Slot Machine Contr: (Vambo)                                                |
| 4174.0 | V02a | Mode: AM Date/time: Mon 31-12-2007, 0300 UTC<br>Remarks: SS YL 5-fig. Very weak Contr: (Westli)                                               |
| 4174.0 | V02a | Mode: AM Date/time: Mon 31-12-2007, 0300 UTC<br>Remarks: A 08104 00234 52654 Contr: (Jon-FL)                                                  |
| 4174.2 | V02a | Mode: AM Date/time: Mon 31-12-2007, 0400 UTC<br>Remarks: A xxxxx xxxxx (Yes-9) 13436 (Yes-9) (joined at 0416z, missed callup) Contr: (Jon-FL) |
| 4181   | E11  | Mode: USB Date/time: 5-12-2007, 1630 UTC<br>Remarks: 287/00 Contr: (MUK)                                                                      |
| 4270   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1500 UTC<br>Remarks: PCD gr 17 I-RHK Contr: (FN)                                                           |
| 4270   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1600 UTC<br>Remarks: PCD2 Contr: (FN)                                                                      |
| 4270   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1700 UTC<br>Remarks: PCD2 Contr: (FN)                                                                      |
| 4461   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1500 UTC<br>Remarks: FTJ gr 51 KPORR Contr: (FN)                                                           |
| 4461   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1600 UTC<br>Remarks: FTJ gr 25 UVGFZ Contr: (FN)                                                           |
| 4461   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1630 UTC<br>Remarks: FTJ2 Contr: (FN)                                                                      |
| 4461   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1700 UTC<br>Remarks: FTJ2 Contr: (FN)                                                                      |
| 4473.0 | XPA  | Mode: AM Date/time: Tue 25-12-2007, 2140 UTC<br>Remarks: msg Contr: (HFD)                                                                     |
| 4484.0 | M51  | Mode: CW Date/time: 12-12-2007, 0500 UTC<br>Remarks: French Mil. CW training Contr: (Jon-FL)                                                  |
| 4503   | M12  | Mode: CW Date/time: Wed 12-12-2007, 2040 UTC<br>Remarks: 925 1 680 117 Contr: (FN)                                                            |
| 4515   | E06  | Mode: AM Date/time: Mon 3-12-2007, 1930 UTC<br>Remarks: 690 248 105 Contr: (FN)                                                               |
| 4515   | E06  | Mode: AM Date/time: Sun 9-12-2007, 1930 UTC<br>Remarks: 690 00000 Contr: (FN)                                                                 |
| 4515.0 | E06  | Mode: AM Date/time: Sun 2-12-2007, 1830 UTC<br>Remarks: 690-248/105=44940, //5785 Contr: (HFD)                                                |
| 4515.0 | E06  | Mode: AM Date/time: Sun 2-12-2007, 1930 UTC<br>Remarks: 690-248/105=44940 Contr: (HFD)                                                        |
| 4560   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1700 UTC<br>Remarks: YHF2 Contr: (FN)                                                                      |
| 4560   | E10  | Mode: AM Date/time: 5-12-2007, 2033 UTC<br>Remarks: YHF2 Contr: (MUK)                                                                         |
| 4577.3 | M21  | Mode: CW Date/time: 8-12-2007, 0831 UTC<br>Remarks: Russian Air Defense =991231??T????? Contr: (DmA)                                          |

|        |      |                                                                                                                     |
|--------|------|---------------------------------------------------------------------------------------------------------------------|
| 4615.0 | M01B | Mode: CW Date/time: Mon 3-12-2007, 2110 UTC<br>Remarks: 136-456/53=61562, //5066 Contr: (HFD)                       |
| 4625   | S28  | Mode: AM Date/time: 5-12-2007, 2036 UTC<br>Remarks: buzz Contr: (MUK)                                               |
| 4792.0 | G06  | Mode: AM Date/time: Fri 28-12-2007, 1930 UTC<br>Remarks: 436-514/25=88535 Contr: (HFD)                              |
| 4836.0 | E06  | Mode: AM Date/time: Thu 6-12-2007, 2030 UTC<br>Remarks: 321-153/21=54234 Contr: (HFD)                               |
| 4880   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1630 UTC<br>Remarks: ULX gr 28 ONTNR Contr: (FN)                                 |
| 4880   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1700 UTC<br>Remarks: ULX gr 47 PQYXF Contr: (FN)                                 |
| 4892.6 | M51  | Mode: CW Date/time: 26-12-2007, 2338 UTC<br>Remarks: French Mil. CW training. fair signal. Contr: (Jon-FL)          |
| 4951.5 | M21  | Mode: CW Date/time: 3-12-2007, 1531 UTC<br>Remarks: PVO ID 0 =991831??0????? Contr: (FN)                            |
| 4951.5 | M21  | Mode: CW Date/time: 3-12-2007, 1808 UTC<br>Remarks: Russian Air Defence =992108??0????? Contr: (MPJ)                |
| 4968.0 | XPA  | Mode: AM Date/time: Tue 11-12-2007, 2120 UTC<br>Remarks: msg Contr: (HFD)                                           |
| 5066.0 | M01B | Mode: CW Date/time: Mon 3-12-2007, 2110 UTC<br>Remarks: 136-456/53=61562 //4615 Contr: (HFD)                        |
| 5142   | M12  | Mode: CW Date/time: Sun 9-12-2007, 2020 UTC<br>Remarks: 191 1 193 243 Contr: (FN)                                   |
| 5142   | M12  | Mode: CW Date/time: Wed 12-12-2007, 2020 UTC<br>Remarks: 191 1 387 193 Contr: (FN)                                  |
| 5153.7 | MX   | Mode: CW Date/time: 17-12-2007, UTC<br>Remarks: Cluster beacon "D" Contr: (FN)                                      |
| 5153.8 | MX   | Mode: CW Date/time: 17-12-2007, UTC<br>Remarks: Cluster beacon "P" Contr: (FN)                                      |
| 5153.9 | MX   | Mode: CW Date/time: 7-12-2007, 1515 UTC<br>Remarks: S: Rus Navy Severomorsk Contr: (WP3)                            |
| 5153.9 | MX   | Mode: CW Date/time: 13-12-2007, UTC<br>Remarks: Cluster beacon "S" Contr: (FN)                                      |
| 5154   | MX   | Mode: CW Date/time: 3-12-2007, UTC<br>Remarks: Cluster beacon "C" Contr: (FN)                                       |
| 5154.0 | MX   | Mode: CW Date/time: 30-11-2007, 1907 UTC<br>Remarks: Navy beacon "C" Contr: (PPA)                                   |
| 5160.0 | S06  | Mode: AM Date/time: Mon 10-12-2007, 2215 UTC<br>Remarks: 210:0 Contr: (HFD)                                         |
| 5165   | E06  | Mode: AM Date/time: 11-12-2007, 2100 UTC<br>Remarks: 652 00000 Contr: (MUK)                                         |
| 5165.0 | E06  | Mode: AM Date/time: Tue 11-12-2007, 2100 UTC<br>Remarks: 652:0 Contr: (HFD)                                         |
| 5200   | M22  | Mode: CW Date/time: 28-11-2007, 1742 UTC<br>Remarks: 4XZ: Israeli Navy Haifa. VVV marker //5500 kHz<br>Contr: (BCI) |



|        |      |                                                                                                                             |
|--------|------|-----------------------------------------------------------------------------------------------------------------------------|
| 5200.0 | M22  | Mode: CW Date/time: 28-11-2007, 1741 UTC<br>Remarks: 4XZ: Israeli Navy Haifa "VVV DE 4XZ 4XZ"<br>Contr: (PPA)               |
| 5203   | M12  | Mode: CW Date/time: Wed 12-12-2007, 2020 UTC<br>Remarks: 925 1 680 117 Contr: (FN)                                          |
| 5230   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1530 UTC<br>Remarks: ULX gr 28 TXKFK Contr: (FN)                                         |
| 5230   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1700 UTC<br>Remarks: ULX gr 47 PQYXF Contr: (FN)                                         |
| 5231.0 | M51  | Mode: CW Date/time: 27-11-2007, 0700 UTC<br>Remarks: 5LGs msgs Contr: (PPA)                                                 |
| 5250.0 | S06  | Mode: AM Date/time: Tue 11-12-2007, 0700 UTC<br>Remarks: 374-201/5=81814 Contr: (HFD)                                       |
| 5330   | M21  | Mode: CW Date/time: 24-11-2007, 1439 UTC<br>Remarks: PVO in progress Contr: (TI)                                            |
| 5339   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1500 UTC<br>Remarks: FTJ gr 51 KPORR Contr: (FN)                                         |
| 5339   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1600 UTC<br>Remarks: FTJ gr 25 UVGFZ Contr: (FN)                                         |
| 5339   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1630 UTC<br>Remarks: FTJ2 Contr: (FN)                                                    |
| 5342.0 | MX   | Mode: CW Date/time: 30-11-2007, 0314 UTC<br>Remarks: Channel marker "V" Khiva Contr: (PPA)                                  |
| 5417.0 | V02a | Mode: LSB Date/time: Fri 28-12-2007, 0200 UTC<br>Remarks: A 65110 (NO-9) 83787 (NO-9) 54362 (NO-9)<br>(uno) Contr: (Jon-FL) |
| 5424   | XPA  | Mode: AM Date/time: 11-12-2007, 2100 UTC<br>Remarks: tones Contr: (MUK)                                                     |
| 5424.0 | XPA  | Mode: AM Date/time: Tue 11-12-2007, 2100 UTC<br>Remarks: msg Contr: (HFD)                                                   |
| 5424.0 | XPA  | Mode: AM Date/time: Tue 25-12-2007, 2100 UTC<br>Remarks: msg Contr: (HFD)                                                   |
| 5432   | M89  | Mode: CW Date/time: 7-12-2007, 0319 UTC<br>Remarks: v CP16 de L9CC Contr: (ALF)                                             |
| 5466   | MX   | Mode: CW Date/time: 3-12-2007, UTC<br>Remarks: Channel marker "R" Contr: (FN)                                               |
| 5500   | M22  | Mode: CW Date/time: 28-11-2007, 1757 UTC<br>Remarks: 4XZ: Israeli Navy Haifa. VVV marker //5500 kHz<br>Contr: (BCI)         |
| 5500   | M89  | Mode: CW Date/time: Mon 17-12-2007, 1612 UTC<br>Remarks: v 7NPE 7NPE 7NPE de QV5B QV5B Contr: (FN)                          |
| 5727   | M89  | Mode: CW Date/time: 6-12-2007, 2108 UTC<br>Remarks: V T3AP de QF3K Contr: (MPJ)                                             |
| 5727   | M89  | Mode: CW Date/time: Sun 16-12-2007, 1935 UTC<br>Remarks: v T3AP T3AP T3AP de QF3K QF3K Contr: (FN)                          |
| 5785   | E06  | Mode: AM Date/time: 9-12-2007, 1830 UTC<br>Remarks: 690 00000 Contr: (MUK)                                                  |
| 5785   | E06  | Mode: AM Date/time: 16-12-2007, 1830 UTC                                                                                    |

|        |      |                                                                                                           |
|--------|------|-----------------------------------------------------------------------------------------------------------|
|        |      | Remarks: 690 690 690 000000 Contr: (AB)                                                                   |
| 5785   | E06  | Mode: AM Date/time: 30-12-2007, 1830 UTC                                                                  |
|        |      | Remarks: 690 000000 Contr: (MUK)                                                                          |
| 5785.0 | E06  | Mode: AM Date/time: Sun 2-12-2007, 1830 UTC                                                               |
|        |      | Remarks: 690-248/105=44940 //4515 Contr: (HFD)                                                            |
| 5800.0 | M08  | Mode: MCW Date/time: Sat 8-12-2007, 0600 UTC                                                              |
|        |      | Remarks: Cuban, Family: XVIII Members: V2A-V2-M8.                                                         |
|        |      | Organization: DGI ? Group Format: 5LG. Contr: (KC2JXC)                                                    |
| 5800.0 | M08a | Mode: MCW Date/time: Sat 29-12-2007, 0559 UTC                                                             |
|        |      | Remarks: 5-fig cut numbers. Contr: (Westli)                                                               |
| 5800.0 | M08a | Mode: MCW Date/time: Mon 31-12-2007, 0610 UTC                                                             |
|        |      | Remarks: Sends 5LG, in the format AR AR AR ITDTN (rpt 5 times) BT BT BT (then perhaps 100 Contr: (KA3YXM) |
| 5800.0 | M08a | Mode: MCW Date/time: Mon 31-12-2007, 1000 UTC                                                             |
|        |      | Remarks: 5-fig cut numbers 15875 22537 Contr: (Westli)                                                    |
| 5820   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1530 UTC                                                               |
|        |      | Remarks: YHF gr 73 ENQKK Contr: (FN)                                                                      |
| 5836.0 | E07  | Mode: AM Date/time: Sun 2-12-2007, 1820 UTC                                                               |
|        |      | Remarks: 989:0 carrier only Contr: (HFD)                                                                  |
| 5836.0 | E07  | Mode: AM Date/time: Sun 16-12-2007, 1820 UTC                                                              |
|        |      | Remarks: 989:0 BC QRM Contr: (HFD)                                                                        |
| 5885.0 | V02a | Mode: AM Date/time: Wed 12-12-2007, 0700 UTC                                                              |
|        |      | Remarks: Spanish numbers station, plays a repeating pattern of numbers in groups of 5 Contr: (CCA)        |
| 5896.0 | E07  | Mode: AM Date/time: Mon 10-12-2007, 2120 UTC                                                              |
|        |      | Remarks: 887:0 Contr: (HFD)                                                                               |
| 5898.0 | M08a | Mode: AM Date/time: Sat 29-12-2007, 0500 UTC                                                              |
|        |      | Remarks: Signal very strong s-9. Contr: (RCh)                                                             |
| 5898.0 | M08a | Mode: CW Date/time: Sat 29-12-2007, 0516 UTC                                                              |
|        |      | Remarks: 5-fig cut numbers USB. Picked up in progress. Contr: (Westli)                                    |
| 5898.0 | M08a | Mode: MCW Date/time: Mon 31-12-2007, 0905 UTC                                                             |
|        |      | Remarks: 5-fig cut numbers. 22537 70302 15875 Contr: (Westli)                                             |
| 5903   | M12  | Mode: CW Date/time: Wed 12-12-2007, 2000 UTC                                                              |
|        |      | Remarks: 925 1 680 117 Contr: (FN)                                                                        |
| 6215   | V24  | Mode: AM Date/time: 31-10-2007, 1530 UTC                                                                  |
|        |      | Remarks: carrier up at 1516 Contr: (TI)                                                                   |
| 6215   | V24  | Mode: AM Date/time: 1-11-2007, 1530 UTC                                                                   |
|        |      | Remarks: carrier up at 1529 Contr: (TI)                                                                   |
| 6215   | V24  | Mode: AM Date/time: 4-11-2007, 1509 UTC                                                                   |
|        |      | Remarks: in progress Contr: (TI)                                                                          |
| 6215   | V24  | Mode: AM Date/time: 6-11-2007, 1207 UTC                                                                   |
|        |      | Remarks: in progress Contr: (TI)                                                                          |
| 6215   | V24  | Mode: AM Date/time: 7-11-2007, 1200 UTC                                                                   |
|        |      | Remarks: carrier up at 1150 Contr: (TI)                                                                   |
| 6215   | V24  | Mode: AM Date/time: 7-11-2007, 1230 UTC                                                                   |
|        |      | Remarks: carrier up at 1217 Contr: (TI)                                                                   |

|        |      |                                                                                                                                                        |
|--------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6215   | V24  | Mode: AM Date/time: 8-11-2007, 1230 UTC<br>Remarks: carrier up at 1218 Contr: (TI)                                                                     |
| 6215   | V24  | Mode: AM Date/time: 12-11-2007, 1330 UTC<br>Remarks: Contr: (TI)                                                                                       |
| 6215   | V24  | Mode: AM Date/time: 13-11-2007, 1430 UTC<br>Remarks: Contr: (TI)                                                                                       |
| 6215   | V24  | Mode: AM Date/time: 15-11-2007, 1538 UTC<br>Remarks: in progress Contr: (TI)                                                                           |
| 6215   | V24  | Mode: AM Date/time: 16-11-2007, 1531 UTC<br>Remarks: in progress Contr: (TI)                                                                           |
| 6215   | V24  | Mode: AM Date/time: 12-12-2007, 1600 UTC<br>Remarks: Contr: (TI)                                                                                       |
| 6215   | V24  | Mode: AM Date/time: 26-12-2007, 1500 UTC<br>Remarks: Contr: (TI)                                                                                       |
| 6215   | V24  | Mode: AM Date/time: 31-12-2007, 1530 UTC<br>Remarks: Contr: (TI)                                                                                       |
| 6270   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1530 UTC<br>Remarks: ULX gr 28 TXKFK Contr: (FN)                                                                    |
| 6305.0 | S06  | Mode: AM Date/time: Wed 19-12-2007, 1210 UTC<br>Remarks: 481-907/5=06956 Contr: (HFD)                                                                  |
| 6320.0 | S06  | Mode: AM Date/time: Tue 11-12-2007, 0715 UTC<br>Remarks: 374-201/5=81814 Contr: (HFD)                                                                  |
| 6370   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1530 UTC<br>Remarks: YHF gr 73 ENQKK Contr: (FN)                                                                    |
| 6428   | E10  | Mode: AM Date/time: 9-12-2007, 1846 UTC<br>Remarks: ABC Contr: (MG)                                                                                    |
| 6428   | E10  | Mode: AM Date/time: 9-12-2007, 1848 UTC<br>Remarks: ABC2 Contr: (MG)                                                                                   |
| 6428.0 | E10  | Mode: AM Date/time: Sun 23-12-2007, 1347 UTC<br>Remarks: ABC Contr: (AB)                                                                               |
| 6445.0 | XSL  | Mode: PSK Date/time: 16-12-2007, 0414 UTC<br>Remarks: Japanese Slot machine Contr: (Vambo)                                                             |
| 6498   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1500 UTC<br>Remarks: PCD gr 17 I-RHK Contr: (FN)                                                                    |
| 6498   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1600 UTC<br>Remarks: PCD2 Contr: (FN)                                                                               |
| 6498   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1700 UTC<br>Remarks: PCD2 Contr: (FN)                                                                               |
| 6575   | E10  | Mode: AM Date/time: 25-12-2007, 1437 UTC<br>Remarks: HNCS Contr: (MrDXer)                                                                              |
| 6768.0 | V02a | Mode: AM Date/time: Sun 9-12-2007, 0400 UTC<br>Remarks: (no callups, main readout halted abruptly 0406, however a faint second readout Contr: (Red)    |
| 6768.0 | V02a | Mode: AM Date/time: Mon 10-12-2007, 0400 UTC<br>Remarks: Started 02354 x 3, stopped 0406, started again, stopped 0408, then polytone tran Contr: (RCh) |
| 6780.0 | E06  | Mode: AM Date/time: Wed 12-12-2007, 1600 UTC<br>Remarks: 825-921/237=12543 Contr: (HFD)                                                                |

|        |      |                                                                                                                           |
|--------|------|---------------------------------------------------------------------------------------------------------------------------|
| 6782.0 | M08a | Mode: CW Date/time: Wed 5-12-2007, 1900 UTC<br>Remarks: (on 6782 instead of the expected 6785 kHz)<br>Contr: (Jon-FL)     |
| 6785.0 | V02a | Mode: LSB Date/time: Thu 6-12-2007, 1900 UTC<br>Remarks: A xxxxx xxxxx 30313 (in progress, missed callup) Contr: (Jon-FL) |
| 6786.0 | M08a | Mode: MCW Date/time: Mon 31-12-2007, 0659 UTC<br>Remarks: 5-fig cut numbers, already in progress. QSB<br>Contr: (Westli)  |
| 6800.0 | S06  | Mode: AM Date/time: Mon 10-12-2007, 2115 UTC<br>Remarks: 210:0 Contr: (HFD)                                               |
| 6805   | E06  | Mode: AM Date/time: 11-12-2007, 2000 UTC<br>Remarks: 652 00000 Contr: (MUK)                                               |
| 6805   | E06  | Mode: AM Date/time: Tue 25-12-2007, 2000 UTC<br>Remarks: 652 983 71 Contr: (FN)                                           |
| 6805.0 | E06  | Mode: AM Date/time: Tue 11-12-2007, 2000 UTC<br>Remarks: 652:0 Contr: (HFD)                                               |
| 6823.5 | M21  | Mode: CW Date/time: 25-12-2007, 1330 UTC<br>Remarks: PVO ID 9 messages and time strings Contr: (FN)                       |
| 6825   | M51  | Mode: CW Date/time: 4-12-2007, 1232 UTC<br>Remarks: FAV22: REF/Mil Morse Practice Contr: (MPJ)                            |
| 6825.0 | M51  | Mode: CW Date/time: 23-12-2007, 0947 UTC<br>Remarks: French mil. CW exercise with French text sent<br>Contr: (PPA)        |
| 6826   | M51  | Mode: CW Date/time: 7-12-2007, 1208 UTC<br>Remarks: French Military CW Training Contr: (DL8AAM)                           |
| 6840   | E10  | Mode: AM Date/time: Wed 5-12-2007, 1600 UTC<br>Remarks: EZI2 Contr: (FN)                                                  |
| 6840.0 | E10  | Mode: AM Date/time: Thu 6-12-2007, 0230 UTC<br>Remarks: EZI2 Contr:                                                       |
| 6840.0 | E10  | Mode: USB Date/time: Sun 9-12-2007, 0300 UTC<br>Remarks: EZI2 Contr: (DM)                                                 |
| 6850   | X06  | Mode: AM Date/time: 30-11-2007, 2343 UTC<br>Remarks: Mazielka 6-tone calling Contr: (ALF)                                 |
| 6855.0 | V02a | Mode: AM Date/time: Sat 1-12-2007, 2100 UTC<br>Remarks: In Progress QRM from broadcast station Contr: (Rus)               |
| 6855.0 | V02a | Mode: AM Date/time: Sun 9-12-2007, 2100 UTC<br>Remarks: in progress Contr: (DM)                                           |
| 6855.0 | V02a | Mode: AM Date/time: Thu 13-12-2007, 2102 UTC<br>Remarks: SSYL5F Atencion 14675 25535 62738 Contr: (CAM)                   |
| 6855.0 | V02a | Mode: AM Date/time: Tue 18-12-2007, 2127 UTC<br>Remarks: Contr: (SAN)                                                     |
| 6855.0 | V02a | Mode: AM Date/time: Tue 18-12-2007, 2127 UTC<br>Remarks: Contr: (SAN)                                                     |
| 6855.0 | V02a | Mode: AM Date/time: Sat 29-12-2007, 2115 UTC<br>Remarks: Contr: (Westli)                                                  |

|        |      |                                                                                                                                                    |
|--------|------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 6855.0 | V02a | Mode: AM Date/time: Sun 30-12-2007, 2100 UTC<br>Remarks: Fair signal.Bean to deteriorate about 2130Z.<br>Contr: (EC)                               |
| 6860.0 | S06  | Mode: AM Date/time: Wed 12-12-2007, 1630 UTC<br>Remarks: 847 weak Contr: (HFD)                                                                     |
| 6867.0 | V02a | Mode: AM Date/time: Mon 24-12-2007, 1600 UTC<br>Remarks: Highly distorted; more like suppressed carrier DSB<br>Contr: (NG)                         |
| 6892.0 | E07  | Mode: AM Date/time: Mon 10-12-2007, 2100 UTC<br>Remarks: only carrier Contr: (HFD)                                                                 |
| 6904   | M12  | Mode: CW Date/time: Sun 9-12-2007, 1940 UTC<br>Remarks: 257 1 7531 107 Contr: (FN)                                                                 |
| 6904   | M12  | Mode: CW Date/time: Sun 9-12-2007, 2040 UTC<br>Remarks: 257 1 765 38 Contr: (FN)                                                                   |
| 6917   | M12  | Mode: CW Date/time: Sun 9-12-2007, 2000 UTC<br>Remarks: 191 1 193 243 Contr: (FN)                                                                  |
| 6917   | M12  | Mode: CW Date/time: Wed 12-12-2007, 2000 UTC<br>Remarks: 191 1 387 193 Contr: (FN)                                                                 |
| 6959.0 | E03  | Mode: USB Date/time: Fri 7-12-2007, 2000 UTC<br>Remarks: Weak signal with static Contr: (Rus-SE)                                                   |
| 6959.0 | E03  | Mode: USB Date/time: Sun 30-12-2007, 1900 UTC<br>Remarks: Contr: (EC)                                                                              |
| 6959.0 | E03  | Mode: USB Date/time: Sun 30-12-2007, 2100 UTC<br>Remarks: Signal began to deteriorate about 2115Z. Contr: (EC)                                     |
| 6959.0 | E03  | Mode: USB Date/time: Sat 29-12-2007, 2200 UTC<br>Remarks: Lincolnshire Poacher,weak and barely readable here on the South Coast of Ma. Contr: (EC) |
| 6982   | E07  | Mode: AM Date/time: 30-12-2007, 1800 UTC<br>Remarks: 989 000 Contr: (MUK)                                                                          |
| 6982.0 | E07  | Mode: AM Date/time: Sun 2-12-2007, 1800 UTC<br>Remarks: 989:0 carrier only Contr: (HFD)                                                            |
| 6982.0 | E07  | Mode: AM Date/time: Sun 16-12-2007, 1800 UTC<br>Remarks: 989:0 Contr: (HFD)                                                                        |
| 7000.0 | M22  | Mode: CW Date/time: 28-11-2007, 1600 UTC<br>Remarks: 4XZ Israeli Navy Haifa "vvv de 4XZ" Contr: (IARUMS)                                           |
| 7038.7 | MX   | Mode: CW Date/time: 17-12-2007, UTC<br>Remarks: Cluster beacon "D" Contr: (FN)                                                                     |
| 7038.8 | MX   | Mode: CW Date/time: 18-12-2007, UTC<br>Remarks: Cluster beacon "P" Contr: (FN)                                                                     |
| 7038.9 | MX   | Mode: CW Date/time: 3-12-2007, UTC<br>Remarks: Cluster beacon "S" Contr: (FN)                                                                      |
| 7038.9 | MX   | Mode: CW Date/time: Fri 28-12-2007, 0015 UTC<br>Remarks: Morse                                                                                     |
| 7039   | MX   | Mode: CW Date/time: 3-12-2007, UTC<br>Remarks: Cluster beacon "C" Contr: (FN)                                                                      |
| 7039.2 | MX   | Mode: CW Date/time: 11-11-2007, 1408 UTC<br>Remarks: Beacon F, Vladivostok Contr: (IARUMS)                                                         |

|        |     |                                                                                                                                    |
|--------|-----|------------------------------------------------------------------------------------------------------------------------------------|
| 7039.2 | MX  | Mode: CW Date/time: 11-11-2007, 1700 UTC<br>Remarks: Beacon F, Vladivostok Contr: (IARUMS)                                         |
| 7039.4 | MX  | Mode: CW Date/time: 11-11-2007, 0644 UTC<br>Remarks: Beacon M, Madagan Contr: (IARUMS)                                             |
| 7056.8 | M89 | Mode: CW Date/time: 18-11-2007, 1747 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7057.5 | M89 | Mode: CW Date/time: 17-11-2007, 1612 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7057.9 | M89 | Mode: CW Date/time: 17-11-2007, 2114 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7058.5 | M89 | Mode: CW Date/time: 19-11-2007, 1813 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7058.7 | M89 | Mode: CW Date/time: 29-11-2007, 1630 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7060.0 | M89 | Mode: CW Date/time: 16-11-2007, 2130 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7060.1 | M89 | Mode: CW Date/time: 30-11-2007, 2145 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7060.5 | M89 | Mode: CW Date/time: 20-11-2007, 1748 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7060.7 | M89 | Mode: CW Date/time: 16-11-2007, 2037 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7061.1 | M89 | Mode: CW Date/time: 14-11-2007, 1630 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7061.6 | M89 | Mode: CW Date/time: 6-11-2007, 1706 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                  |
| 7062.3 | M89 | Mode: CW Date/time: 9-11-2007, 2138 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                  |
| 7062.9 | M89 | Mode: CW Date/time: 10-11-2007, 2234 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7063.3 | M89 | Mode: CW Date/time: 13-11-2007, 2013 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7063.5 | M89 | Mode: CW Date/time: 21-11-2007, 1042 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7063.7 | M89 | Mode: CW Date/time: 21-11-2007, 1623 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7064.5 | M89 | Mode: CW Date/time: 12-11-2007, 1730 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7065.6 | M89 | Mode: CW Date/time: 25-11-2007, 1521 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC + msg "svc<br>0262315 rmks" etc Contr: (IARUMS) |
| 7065.7 | M89 | Mode: CW Date/time: 15-11-2007, 1710 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7065.8 | M89 | Mode: CW Date/time: 15-11-2007, 2015 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7066.5 | M89 | Mode: CW Date/time: 27-11-2007, 1747 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr: (IARUMS)                                 |
| 7066.7 | M89 | Mode: CW Date/time: 7-11-2007, 1842 UTC                                                                                            |

|        |      |                                                                                                                                                            |
|--------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7066.9 | M89  | Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr:(IARUMS)<br>Mode: CW Date/time: 26-11-2007, 2116 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr:(IARUMS) |
| 7067.8 | M89  | Mode: CW Date/time: 4-11-2007, 1938 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr:(IARUMS)                                                           |
| 7068.7 | M89  | Mode: CW Date/time: 23-11-2007, 1954 UTC<br>Remarks: V CP17 CP17 CP17 de L9CC L9CC Contr:(IARUMS)                                                          |
| 7500   | M22  | Mode: CW Date/time: 2-12-2007, 1954 UTC<br>Remarks: 4XZ: Israeli Navy Tel Aviv VVV-mkr. Contr:(DL8AAM)                                                     |
| 7500   | M22  | Mode: CW Date/time: 2-12-2007, 2245 UTC<br>Remarks: 4XZ: Israeli Navy Haifa. VVV marker Contr: (BCI)                                                       |
| 7519.0 | M08a | Mode: CW Date/time: Wed 19-12-2007, 2209 UTC<br>Remarks: gud sig S9+10db in M0. Faster CW than other M8a transmissions heard today. Contr: (WA8QFE)        |
| 7519.0 | M08a | Mode: MCW Date/time: Fri 28-12-2007, 2159 UTC<br>Remarks: Very weak west coast USA Contr: (Westli)                                                         |
| 7582   | M89  | Mode: CW Date/time: 29-12-2007, 0914 UTC<br>Remarks: V 7NPE 7NPE 7NPE DE QV5B QV5B Contr: (Sferix)                                                         |
| 7681   | V02a | Mode: LSB Date/time: 27-12-2007, 1914 UTC<br>Remarks: w/ 5F msgs Contr: (N2UHC)                                                                            |
| 7681.0 | V02a | Mode: LSB Date/time: Thu 27-12-2007, 1900 UTC<br>Remarks: A xxxxx 44626 (NO-9) 20482 (NO-9) (weak crosstalk from R Reloj) Contr: (Jon-FL)                  |
| 7749.0 | E11  | Mode: USB Date/time: 7-12-2007, 1035 UTC<br>Remarks: 312/00 "Out" Contr: (KK2)                                                                             |
| 7798   | E11  | Mode: USB Date/time: 11-12-2007, 0915 UTC<br>Remarks: 221/00 Contr: (MUK)                                                                                  |
| 7798.0 | E11  | Mode: USB Date/time: Tue 18-12-2007, 0920 UTC<br>Remarks: ip Contr: (HFD)                                                                                  |
| 7887   | SK01 | Mode: PSK31 Date/time: 30-12-2007, 2045 UTC<br>Remarks: PSK220FEC modulated. File transfer. Contr: (Jon-FL)                                                |
| 7887.0 | V02a | Mode: AM Date/time: Fri 7-12-2007, 2000 UTC<br>Remarks: Strong carrier at 2000 but no callups; started right into traffic at 2004 Contr: (MD)              |
| 7887.0 | V02a | Mode: AM Date/time: Sun 9-12-2007, 2003 UTC<br>Remarks: in progress calling 64118 Contr: (CAM)                                                             |
| 7887.0 | V02a | Mode: AM Date/time: Thu 20-12-2007, 2000 UTC<br>Remarks: A 02550 (NO-9) 24130 (NO-9) 42071 (NO-9) (partial callup, dropouts) Contr: (Jon-FL)               |
| 7887.0 | V02a | Mode: AM Date/time: Thu 27-12-2007, 2000 UTC<br>Remarks: A xxxxx (NO-9) 58604 (NO-9) 81726 (NO-9) (late start, no callup) Contr: (Jon-FL)                  |
| 7887.0 | V02a | Mode: AM Date/time: Thu 27-12-2007, 2007 UTC<br>Remarks: SSYL5F started late Contr: (CAM)                                                                  |
| 7887.0 | V02a | Mode: AM Date/time: Fri 28-12-2007, 2001 UTC<br>Remarks: ssyl5f Atencion 91831 88642 41233 Contr:(CAM)                                                     |
| 7887.0 | V02a | Mode: AM Date/time: Sun 30-12-2007, 2000 UTC<br>Remarks: AT 2045Z a clear digital signal broadcast for                                                     |

|        |      |                                                    |                                                                                                                       |
|--------|------|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
|        |      | approximately 30 seconds on same f                 | Contr: (EC)                                                                                                           |
| 7887.0 | V02a | Mode: AM Date/time: Mon 31-12-2007, 2000 UTC       | Remarks: Contr: (Westli)                                                                                              |
| 7931   | M12  | Mode: CW Date/time: Sun 9-12-2007, 1920 UTC        | Remarks: 257 1 7531 107 Contr: (FN)                                                                                   |
| 7931   | M12  | Mode: CW Date/time: Sun 9-12-2007, 2020 UTC        | Remarks: 257 1 765 38 Contr: (FN)                                                                                     |
| 7974.0 | M08a | Mode: CW Date/time: Fri 7-12-2007, 2108 UTC        | Remarks: in progress calling IUNAT IUNAT IUNAT Contr:(CAM)                                                            |
| 7974.0 | M08a | Mode: CW Date/time: Fri 7-12-2007, 2108 UTC        | Remarks: in progress calling IUNAT IUNAT IUNAT Contr:(CAM)                                                            |
| 7974.0 | M08a | Mode: CW Date/time: Fri 7-12-2007, 2114 UTC        | Remarks: in progress calling IUNAT IUNAT IUNAT Contr:(CAM)                                                            |
| 8009.0 | M08  | Mode: CW Date/time: Mon 10-12-2007, 2014 UTC       | Remarks: Missed 1st two idents; third ident was WUDRI (54367) Contr: (MD)                                             |
| 8030   | M42  | Mode: 32-tone MFSK Date/time: 25-12-2007, 1704 UTC | Remarks: Dep. of State Comms, Moscow. Offline crypto traffic to unlocated Russian embassy. Link ID 00189 Contr: (LDO) |
| 8058.5 | M42  | Mode: CROWD36 Date/time: 26-11-2007, 1706 UTC      | Remarks: in progress Contr: (BCI)                                                                                     |
| 8066.4 | M42  | Mode: CROWD36 Date/time: 27-12-2007, 1740 UTC      | Remarks: Russian diplo. Encrypted traffic Contr: (PPA)                                                                |
| 8088   | M42  | Mode: CROWD36 Date/time: 11-12-2007, 0935 UTC      | Remarks: in progress Contr: (MUK)                                                                                     |
| 8088.0 | G11  | Mode: USB Date/time: Wed 5-12-2007, 0730 UTC       | Remarks: G11 YL "Strich" for "508/00" Contr: (PoRus)                                                                  |
| 8097   | M08a | Mode: MCW Date/time: 26-12-2007, 1801 UTC          | Remarks: w/ 5F msgs Contr: (N2UHC)                                                                                    |
| 8097   | M08a | Mode: MCW Date/time: 27-12-2007, 1904 UTC          | Remarks: w/ 5F msgs Contr: (N2UHC)                                                                                    |
| 8097.0 | M08  | Mode: CW Date/time: Fri 7-12-2007, 1800 UTC        | Remarks: 60121 86504 72404 Contr: (MD)                                                                                |
| 8097.0 | M08  | Mode: CW Date/time: Fri 7-12-2007, 1900 UTC        | Remarks: 60121 86504 72404, Repeat of 1800 broadcast Contr: (MD)                                                      |
| 8097.0 | M08a | Mode: MCW Date/time: Fri 7-12-2007, 1801 UTC       | Remarks: RTANA GRWTU INUTU Contr: (CAM)                                                                               |
| 8097.0 | M08a | Mode: MCW Date/time: Fri 7-12-2007, 1801 UTC       | Remarks: RTANA GRWTU INUTU Contr: (CAM)                                                                               |
| 8097.0 | M08a | Mode: MCW Date/time: Fri 7-12-2007, 1801 UTC       | Remarks: RTANA GRWTU INUTU Contr: (CAM)                                                                               |
| 8097.0 | M08a | Mode: MCW Date/time: Mon 10-12-2007, 1901 UTC      | Remarks: DDGDA RIIAA GAWGA Contr: (CAM)                                                                               |
| 8097.0 | M08a | Mode: MCW Date/time: Tue 11-12-2007, 1800 UTC      | Remarks: 00454 Contr: (DM)                                                                                            |
| 8097.0 | M08a | Mode: MCW Date/time: Fri 14-12-2007, 1801 UTC      |                                                                                                                       |



|        |      |                                                                                                                                                                                 |
|--------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        |      | Remarks: TWNGD RIGRN RWTGD Contr: (CAM)                                                                                                                                         |
| 8097.0 | M08a | Mode: MCW Date/time: Tue 18-12-2007, 1600 UTC<br>Remarks: 59+10 sig. wirwa gauad innrw gauad<br>innrw,,gauad repeated 5 times then - - - Contr: (WA8QFE)                        |
| 8097.0 | M08a | Mode: MCW Date/time: Tue 18-12-2007, 1700 UTC<br>Remarks: Gud sig Contr: (WA8QFE)                                                                                               |
| 8097.0 | M08a | Mode: MCW Date/time: Wed 19-12-2007, 1600 UTC<br>Remarks: 15wpm MCW,S5 to 6 w/QSB Contr: (WA8QFE)                                                                               |
| 8097.0 | M08a | Mode: MCW Date/time: Wed 19-12-2007, 1800 UTC<br>Remarks: 15wpm MCW,S5 to 6 w/QSB..disregard post for<br>1600z, wrong time Contr: (WA8QFE)                                      |
| 8097.0 | M08a | Mode: MCW Date/time: Wed 19-12-2007, 1900 UTC<br>Remarks: S6-7 w/QSB Contr: (WA8QFE)                                                                                            |
| 8097.0 | M08a | Mode: MCW Date/time: Thu 20-12-2007, 1802 UTC<br>Remarks: GAWWT UINGW ITRTI Contr:                                                                                              |
| 8097.0 | M08a | Mode: MCW Date/time: Fri 21-12-2007, 1408 UTC<br>Remarks: In progress; S9+10 dB , slight QSB Contr: (BG)                                                                        |
| 8097.0 | M08a | Mode: MCW Date/time: Tue 25-12-2007, 1900 UTC<br>Remarks: ID 60719 44121 03060 (weak v2a in background)<br>Contr: (Jon-FL)                                                      |
| 8097.0 | M08a | Mode: MCW Date/time: Thu 27-12-2007, 1900 UTC<br>Remarks: ID 35770 25800 40848 (crosstalk from v2a on<br>7681 LSB) Contr: (Jon-FL)                                              |
| 8097.0 | M08a | Mode: MCW Date/time: Thu 27-12-2007, 1901 UTC<br>Remarks: DWIIT NWGTT UTGUG Contr: (CAM)                                                                                        |
| 8097.0 | M08a | Mode: MCW Date/time: Mon 31-12-2007, 1802 UTC<br>Remarks: GGMUA UNUAA UDRNW Contr: (CAM)                                                                                        |
| 8097.0 | M08a | Mode: MCW Date/time: Mon 31-12-2007, 1901 UTC<br>Remarks: GGMUA UNUAA UDRNW Contr: (CAM)                                                                                        |
| 8097.0 | M08a | Mode: MCW Date/time: Mon 31-12-2007, 1910 UTC<br>Remarks: 5-fig cut numbers, already in progress. QSB<br>Contr: (Westli)                                                        |
| 8110   | M42  | Mode: RTTY 200/485 Date/time: 29-12-2007, 1252 UTC<br>Remarks: ++++++18 =8531 510336871113668123<br>=8272 0830454425204319 =8733 21119995851901299<br>=8844 348887 Contr: (WP3) |
| 8110.5 | M42  | Mode: CROWD36 Date/time: 26-11-2007, 1709 UTC<br>Remarks: in progress Contr: (BCI)                                                                                              |
| 8117   | M12  | Mode: CW Date/time: Sun 9-12-2007, 1940 UTC<br>Remarks: 191 1 193 243 Contr: (FN)                                                                                               |
| 8117   | M12  | Mode: CW Date/time: Wed 12-12-2007, 1940 UTC<br>Remarks: 191 1 387 193 Contr: (FN)                                                                                              |
| 8147.0 | XPA  | Mode: AM Date/time: Tue 11-12-2007, 0700 UTC<br>Remarks: msg Contr: (HFD)                                                                                                       |
| 8147.0 | XPA  | Mode: AM Date/time: Tue 18-12-2007, 0700 UTC<br>Remarks: msg Contr: (HFD)                                                                                                       |
| 8180   | E17  | Mode: USB Date/time: 14-12-2007, 1440 UTC<br>Remarks: 274 801/25 Contr: (MUK)                                                                                                   |

|        |      |                                                                                                                      |
|--------|------|----------------------------------------------------------------------------------------------------------------------|
| 8180   | SK01 | Mode: RDFT Date/time: 20-12-2007, 0800 UTC<br>Remarks: File transfer Contr: (Arne)                                   |
| 8180   | SK01 | Mode: RDFT Date/time: 25-12-2007, 0800 UTC<br>Remarks: File transfer Contr: (Arne)                                   |
| 8494.7 | MX   | Mode: CW Date/time: 17-12-2007, UTC<br>Remarks: Cluster beacon "D" Contr: (FN)                                       |
| 8494.8 | MX   | Mode: CW Date/time: 19-12-2007, 1535 UTC<br>Remarks: P: Beacon Kaliningrad Contr: (MPJ)                              |
| 8494.8 | MX   | Mode: CW Date/time: 28-12-2007, 1331 UTC<br>Remarks: Beacon "P" Kaliningrad Contr: (WP3)                             |
| 8494.9 | MX   | Mode: CW Date/time: 3-12-2007, 2116 UTC<br>Remarks: Cluster beacon "S" Contr: (Jon-FL)                               |
| 8494.9 | MX   | Mode: CW Date/time: 17-12-2007, UTC<br>Remarks: Cluster beacon "S" Contr: (FN)                                       |
| 8495   | MX   | Mode: CW Date/time: 3-12-2007, UTC<br>Remarks: Cluster beacon "C" Contr: (FN)                                        |
| 8621   | V26  | Mode: LSB Date/time: 27-12-2007, 0021 UTC<br>Remarks: Mechanical female voice speaking numbers in Ch<br>Contr: (PBA) |
| 8800   | E11  | Mode: USB Date/time: 6-12-2007, 0845 UTC<br>Remarks: 232/00 Contr: (MUK)                                             |
| 8800   | E11  | Mode: USB Date/time: 7-12-2007, 0845 UTC<br>Remarks: 232/00 Contr: (MUK)                                             |
| 8800   | E11  | Mode: USB Date/time: 14-12-2007, 0845 UTC<br>Remarks: 232/00 Contr: (MUK)                                            |
| 9040.0 | V02a | Mode: AM Date/time: Fri 28-12-2007, 0900 UTC<br>Remarks: syl 5-fig Atencion Continuing... Contr: (Westli)            |
| 9049.0 | S11A | Mode: AM Date/time: Thu 20-12-2007, 1000 UTC<br>Remarks: 978/121=21679 Contr: (HFD)                                  |
| 9060.0 | M03  | Mode: CW Date/time: Mon 17-12-2007, 0815 UTC<br>Remarks: 552/00 Contr: (HFD)                                         |
| 9063.0 | M08  | Mode: MCW Date/time: Fri 28-12-2007, 0802 UTC<br>Remarks: 5-fig cut numbers Contr: (Westli)                          |
| 9153.0 | M08  | Mode: MCW Date/time: Fri 28-12-2007, 0707 UTC<br>Remarks: 5-fig (late start, no callups).<br>Contr: (Westli)         |
| 9176   | M12  | Mode: CW Date/time: Sun 9-12-2007, 1900 UTC<br>Remarks: 257 1 7531 107 Contr: (FN)                                   |
| 9176   | M12  | Mode: CW Date/time: Sun 9-12-2007, 2000 UTC<br>Remarks: 257 1 765 38 Contr: (FN)                                     |
| 9179   | S11a | Mode: USB Date/time: 3-12-2007, 0900 UTC<br>Remarks: 978/121 Contr: (MUK)                                            |
| 9179   | S11a | Mode: USB Date/time: 10-12-2007, 0911 UTC<br>Remarks: in progress Contr: (MUK)                                       |
| 9179.0 | S11A | Mode: USB Date/time: Mon 3-12-2007, 0900 UTC<br>Remarks: 978/121=21679 Contr: (HFD)                                  |
| 9179.0 | S11A | Mode: USB Date/time: Mon 17-12-2007, 0900 UTC<br>Remarks: 978/121 Contr: (HFD)                                       |

|         |      |                                                                                                                                       |
|---------|------|---------------------------------------------------------------------------------------------------------------------------------------|
| 9179.0  | S11A | Mode: USB Date/time: Mon 24-12-2007, 0900 UTC<br>Remarks: 978/121 Contr: (HFD)                                                        |
| 9251.0  | E03  | Mode: USB Date/time: Fri 7-12-2007, 2000 UTC<br>Remarks: Jamming evident Contr: (Rus-SE)                                              |
| 9272.0  | V07  | Mode: AM Date/time: Tue 11-12-2007, 0600 UTC<br>Remarks: 261:0 Contr: (HFD)                                                           |
| 9278    | M21  | Mode: CW Date/time: 10-12-2007, 0814 UTC<br>Remarks: PVO ID 8 time strings Contr: (FN)                                                |
| 9340    | M42  | Mode: CROWD36 Date/time: 11-12-2007, 0926 UTC<br>Remarks: in progress Contr: (MUK)                                                    |
| 9443.0  | G11  | Mode: USB Date/time: Fri 14-12-2007, 1100 UTC<br>Remarks: 508/00 Contr: (HFD)                                                         |
| 9610.0  | S11a | Mode: USB Date/time: Wed 5-12-2007, 0900 UTC<br>Remarks: S11a YL "Cherta" send message for "218" - 35 groups, "218/35" Contr: (PoRus) |
| 9750    | M23  | Mode: CW Date/time: Sat 22-12-2007, 1258 UTC<br>Remarks: 757 (R10) //11170 Contr: (JPL-SE)                                            |
| 9750    | M23  | Mode: CW Date/time: Sun 23-12-2007, 1258 UTC<br>Remarks: 757 (R10) //11170 Contr: (JPL-SE)                                            |
| 9750    | M23  | Mode: CW Date/time: 24-12-2007, 1300 UTC<br>Remarks: 757 (R10) //11170 Contr: (JPL-SE)                                                |
| 9750    | M23  | Mode: CW Date/time: 25-12-2007, 1303 UTC<br>Remarks: 757 (Cont'd) //11170 Contr: (JPL-SE)                                             |
| 9750    | M23  | Mode: CW Date/time: 26-12-2007, 1300 UTC<br>Remarks: 757 (R10) //11170 Contr: (JPL-SE)                                                |
| 9750    | M23  | Mode: CW Date/time: 27-12-2007, 1300 UTC<br>Remarks: 757 (R10) //11170 Contr: (JPL-SE)                                                |
| 9750    | M23  | Mode: CW Date/time: 28-12-2007, 1300 UTC<br>Remarks: 757 (R10) //11170 Contr: (JPL-SE)                                                |
| 9750    | M23  | Mode: CW Date/time: 31-12-2007, 1300 UTC<br>Remarks: 757 (R10) //11170 Contr: (JPL-SE)                                                |
| 10127   | X06  | Mode: AM Date/time: 10-12-2007, 0916 UTC<br>Remarks: Mazielka. Sequence: 421635 Contr: (MUK)                                          |
| 10147.0 | XPA  | Mode: AM Date/time: Tue 18-12-2007, 0720 UTC<br>Remarks: msg Contr: (HFD)                                                             |
| 10240   | E17  | Mode: USB Date/time: 14-12-2007, 1420 UTC<br>Remarks: 274 801/25 Contr: (MUK)                                                         |
| 10335.0 | X06  | Mode: AM Date/time: Thu 27-12-2007, 1150 UTC<br>Remarks: Six tones:154632, loud and clear. Contr: (Poglad)                            |
| 10445   | M08a | Mode: CW Date/time: 27-12-2007, 0302 UTC<br>Remarks: w/ 5F msgs Contr: (N2UHC)                                                        |
| 10672.0 | V07  | Mode: AM Date/time: Tue 11-12-2007, 0620 UTC<br>Remarks: 261:0 Contr: (HFD)                                                           |
| 10871.7 | MX   | Mode: CW Date/time: 18-12-2007, UTC<br>Remarks: Cluster beacon "D" Contr: (FN)                                                        |
| 10871.8 | MX   | Mode: CW Date/time: 18-12-2007, UTC<br>Remarks: Cluster beacon "P" Contr: (FN)                                                        |
| 10871.9 | MX   | Mode: CW Date/time: 4-12-2007, UTC                                                                                                    |

|         |     |                                                                                                                                    |
|---------|-----|------------------------------------------------------------------------------------------------------------------------------------|
| 10872   | MX  | Remarks: Cluster beacon "S" Contr: (FN)<br>Mode: CW Date/time: 3-12-2007, UTC                                                      |
| 11104.0 | E11 | Remarks: Cluster beacon "C" Contr: (FN)<br>Mode: USB Date/time: Tue 11-12-2007, 1115 UTC                                           |
| 11170   | E17 | Remarks: 193/00 Contr: (HFD)<br>Mode: USB Date/time: 13-12-2007, 0800 UTC                                                          |
| 11170   | M23 | Remarks: 674 205/5 201/5 15054 95575 30777 19813<br>73047 201/5 000000 Contr: (MUK)<br>Mode: CW Date/time: Sun 2-12-2007, 1259 UTC |
| 11170   | M23 | Remarks: 757 (R10) (New Format) Contr: (JPL-SE)<br>Mode: CW Date/time: Sun 2-12-2007, 1708 UTC                                     |
| 11170   | M23 | Remarks: 5(x1) (Should be 555) Contr: (JPL-NL)<br>Mode: CW Date/time: Mon 3-12-2007, 1300 UTC                                      |
| 11170   | M23 | Remarks: 757 (R10) Contr: (JPL-SE)<br>Mode: CW Date/time: Wed 5-12-2007, 1300 UTC                                                  |
| 11170   | M23 | Remarks: 757 (R10) Contr: (JPL-SE)<br>Mode: CW Date/time: Thu 6-12-2007, 1300 UTC                                                  |
| 11170   | M23 | Remarks: 757 (R10) Contr: (JPL-SE)<br>Mode: CW Date/time: Thu 7-12-2007, 1300 UTC                                                  |
| 11170   | M23 | Remarks: 757 (R10) Contr: (JPL-SE)<br>Mode: CW Date/time: Sat 8-12-2007, 1300 UTC                                                  |
| 11170   | M23 | Remarks: 757 (R10) (New Format) Contr: (JPL-SE)<br>Mode: CW Date/time: Tue 11-12-2007, 1300 UTC                                    |
| 11170   | M23 | Remarks: 757 (R10) Contr: (JPL-SE)<br>Mode: CW Date/time: Wed 12-12-2007, 1300 UTC                                                 |
| 11170   | M23 | Remarks: 757 (R10) Contr: (JPL-SE)<br>Mode: CW Date/time: Fri 14-12-2007, 1300 UTC                                                 |
| 11170   | M23 | Remarks: 757 (R10) Contr: (JPL-SE)<br>Mode: CW Date/time: Sat 15-12-2007, 1300 UTC                                                 |
| 11170   | M23 | Remarks: 757 (R10) New Format Contr: (JPL-SE)<br>Mode: CW Date/time: Sun 16-12-2007, 1300 UTC                                      |
| 11170   | M23 | Remarks: 757 (R10) New Format Contr: (JPL-SE)<br>Mode: CW Date/time: Thu 20-12-2007, 1300 UTC                                      |
| 11170   | M23 | Remarks: 757 (R10) Contr: (JPL-SE)<br>Mode: CW Date/time: Fri 21-12-2007, 1304 UTC                                                 |
| 11170   | M23 | Remarks: 757 (Cont'd) Contr: (JPL-SE)<br>Mode: CW Date/time: Sat 22-12-2007, 1258 UTC                                              |
| 11170   | M23 | Remarks: 757 (R10) //9750 Contr: (JPL-SE)<br>Mode: CW Date/time: Sun 23-12-2007, 1258 UTC                                          |
| 11170   | M23 | Remarks: 757 (R10) //9750 Contr: (JPL-SE)<br>Mode: CW Date/time: 24-12-2007, 1300 UTC                                              |
| 11170   | M23 | Remarks: 757 (R10) //9750 Contr: (JPL-SE)<br>Mode: CW Date/time: 25-12-2007, 1303 UTC                                              |
| 11170   | M23 | Remarks: 757 (Cont'd) //9750 Contr: (JPL-SE)<br>Mode: CW Date/time: 26-12-2007, 1300 UTC                                           |
| 11170   | M23 | Remarks: 757 (R10) //9750 Contr: (JPL-SE)<br>Mode: CW Date/time: 27-12-2007, 1300 UTC                                              |
| 11170   | M23 | Remarks: 757 (R10) //9750 Contr: (JPL-SE)                                                                                          |

|         |      |                                                                                                                                                                                   |
|---------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11170   | M23  | Mode: CW Date/time: 28-12-2007, 1300 UTC<br>Remarks: 757 (R10) //9750 Contr: (JPL-SE)                                                                                             |
| 11170   | M23  | Mode: CW Date/time: 30-12-2007, 1300 UTC<br>Remarks: 757 (R10) Contr: (JPL-SE)                                                                                                    |
| 11170   | M23  | Mode: CW Date/time: 31-12-2007, 1300 UTC<br>Remarks: 757 (R10) //9750 Contr: (JPL-SE)                                                                                             |
| 11170.0 | E17Z | Mode: USB Date/time: Thu 13-12-2007, 0800 UTC<br>Remarks: 674-205/5=55054 Contr: (HFD)                                                                                            |
| 11538   | X06  | Mode: AM Date/time: 24-12-2007, 0937 UTC<br>Remarks: Mazielka 6 tone selcall tone sequence 421635<br>Contr: (PPA)                                                                 |
| 11545.0 | E03  | Mode: USB Date/time: Fri 7-12-2007, 2000 UTC<br>Remarks: Strong signal faded at 2016 with interference<br>Contr: (Rus-SE)                                                         |
| 11545.0 | E03  | Mode: USB Date/time: Wed 19-12-2007, 1833 UTC<br>Remarks: lincolnshire poacher in progress Contr: (SAN)                                                                           |
| 12082.0 | M12  | Mode: CW Date/time: Fri 7-12-2007, 1320 UTC<br>Remarks: Call: 530 (x3) 1 then 85 x 5FG 25wpm. End with<br>000 000 Contr: (MD)                                                     |
| 12120   | X06  | Mode: AM Date/time: 17-12-2007, 0825 UTC<br>Remarks: Mazielka. Sequence: 164253 Contr: (RiN)                                                                                      |
| 12122   | M42  | Mode: 32-tone MFSK Date/time: 24-12-2007, 0808 UTC<br>Remarks: Dep. of State Comms, Moscow. Offline crypto<br>traffic to unlocated Russian embassy. Link ID 00142 Contr:<br>(LDO) |
| 12147.0 | XPA  | Mode: AM Date/time: Tue 18-12-2007, 0740 UTC<br>Remarks: msg Contr: (HFD)                                                                                                         |
| 12153   | E11  | Mode: USB Date/time: 3-12-2007, 0852 UTC<br>Remarks: In progress Contr: (MUK)                                                                                                     |
| 12153   | E11  | Mode: USB Date/time: 10-12-2007, 0845 UTC<br>Remarks: 255/90 Contr: (MUK)                                                                                                         |
| 12153.0 | E11A | Mode: USB Date/time: Mon 3-12-2007, 0845 UTC<br>Remarks: 255/90=11111 39498 Contr: (HFD)                                                                                          |
| 12180.0 | V02a | Mode: AM Date/time: Tue 11-12-2007, 1900 UTC<br>Remarks: A xxxxx xxxxx(NO-9) 20888(NO-9) (new voice,<br>in progress, missed callup) Contr: (Jon-FL)                               |
| 12213   | X06  | Mode: AM Date/time: 14-12-2007, 0855 UTC<br>Remarks: Mazielka. Sequence: 615243 Contr: (GN)                                                                                       |
| 13375.0 | E03  | Mode: USB Date/time: Sat 8-12-2007, 0018 UTC<br>Remarks: FADING Not on any ofther Frequencies, just<br>above the Noise Floor, occoasionaly b Contr: (VA3SUG)                      |
| 13380.0 | V02a | Mode: LSB Date/time: Tue 18-12-2007, 1800 UTC<br>Remarks: weak and finally lost in QSB Contr: (WA8QFE)                                                                            |
| 13380.2 | V02a | Mode: AM Date/time: Thu 20-12-2007, 2000 UTC<br>Remarks: (DSB, spurr, parallel v2a on 7887) Contr: (Jon-FL)                                                                       |
| 13380.2 | V02a | Mode: LSB Date/time: Thu 27-12-2007, 2000 UTC<br>Remarks: A xxxxx 44626 (NO-9) 20482 (NO-9) (in<br>progress, missed callup) Contr: (Jon-FL)                                       |

|         |      |                                                                                                                                             |
|---------|------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 13527.7 | MX   | Mode: CW Date/time: 18-12-2007, UTC<br>Remarks: Cluster beacon "D" Contr: (FN)                                                              |
| 13527.8 | MX   | Mode: CW Date/time: 26-12-2007, UTC<br>Remarks: Cluster beacon "P" Contr: (FN)                                                              |
| 13527.9 | MX   | Mode: CW Date/time: 8-12-2007, UTC<br>Remarks: Cluster beacon "S" Contr: (FN)                                                               |
| 13528   | MX   | Mode: CW Date/time: 3-12-2007, UTC<br>Remarks: Cluster beacon "C" Contr: (FN)                                                               |
| 14000.0 | E10  | Mode: AM Date/time: 5-11-2007, 1527 UTC<br>Remarks: EZI 2 Contr: (IARUMS)                                                                   |
| 14000.0 | E10  | Mode: AM Date/time: 5-11-2007, 1559 UTC<br>Remarks: U1X 2 Contr: (IARUMS)                                                                   |
| 14000.0 | E10  | Mode: AM Date/time: 5-11-2007, 1559 UTC<br>Remarks: U1X 2 Contr: (IARUMS)                                                                   |
| 14710   | M23  | Mode: CW Date/time: Mon 3-12-2007, 1706 UTC<br>Remarks: 555 (Cont'd) Contr: (JPL-SE)                                                        |
| 14710   | M23  | Mode: CW Date/time: Thu 13-12-2007, 1305 UTC<br>Remarks: 757 Sked normally on 11170 Contr: (JPL-SE)                                         |
| 15858   | X06  | Mode: AM Date/time: 31-12-2007, 0913 UTC<br>Remarks: Mazielka. Sequence: 256134 Contr: (RiN)                                                |
| 16331.7 | MX   | Mode: CW Date/time: 26-12-2007, UTC<br>Remarks: Cluster beacon "D" Contr: (FN)                                                              |
| 16331.8 | MX   | Mode: CW Date/time: 26-12-2007, UTC<br>Remarks: Cluster beacon "P" Contr: (FN)                                                              |
| 16331.9 | MX   | Mode: CW Date/time: 8-12-2007, UTC<br>Remarks: Cluster beacon "S" Contr: (FN)                                                               |
| 16332   | MX   | Mode: CW Date/time: 8-12-2007, UTC<br>Remarks: Cluster beacon "C" Contr: (FN)                                                               |
| 16332   | MX   | Mode: CW Date/time: 11-12-2007, 1132 UTC<br>Remarks: Cluster beacon "C". Defective loop. Last character<br>"F" in place of "C" Contr: (MUK) |
| 17345.0 | SK01 | Mode: RDFT Date/time: 12-12-2007, 1700 UTC<br>Remarks: file: assumed to be 1112000.txt Contr: (Jon-FL)                                      |
| 17345.0 | SK01 | Mode: RDFT Date/time: 12-12-2007, 1710 UTC<br>Remarks: file:1112010.txt Contr: (Jon-FL)                                                     |
| 17345.0 | SK01 | Mode: RDFT Date/time: 12-12-2007, 1720 UTC<br>Remarks: file:1112020.txt Contr: (Jon-FL)                                                     |
| 17345.0 | SK01 | Mode: RDFT Date/time: 12-12-2007, 1730 UTC<br>Remarks: file:1112030.txt Contr: (Jon-FL)                                                     |
| 17345.0 | SK01 | Mode: RDFT Date/time: 12-12-2007, 1740 UTC<br>Remarks: file:1112040.txt content of each file exactly<br>Contr:(Jon-FL)                      |
| 17435   | SK01 | Mode: RDFT Date/time: 13-12-2007, 1700 UTC<br>Remarks: brief transmissions every 7-10 minutes. Contr:(HS)                                   |
| 17435   | SK01 | Mode: RDFT Date/time: 18-12-2007, 1700 UTC<br>Remarks: File 231115.txt Contr: (HS)                                                          |
| 17435   | SK01 | Mode: RDFT Date/time: 19-12-2007, 1700 UTC<br>Remarks: Files 231109.txt, 231113.txt, 231114.txt. Same                                       |

|         |      |                                                                                                                                                      |
|---------|------|------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |      | Contr: (HS)                                                                                                                                          |
| 17435   | V02a | Mode: AM Date/time: 24-12-2007, 1700 UTC<br>Remarks: w/ 53891 54037 48875 callup & 5F msgs Contr: (N2UHC)                                            |
| 17435   | V02a | Mode: AM Date/time: 27-12-2007, 1700 UTC<br>Remarks: w/ 71583 57432 38646 callup & 5F msgs Contr: (N2UHC)                                            |
| 17435   | V02a | Mode: AM Date/time: 28-12-2007, 1705 UTC<br>Remarks: w/ 5F msgs Contr: (N2UHC)                                                                       |
| 17435.0 | SK01 | Mode: RDFT Date/time: 11-12-2007, 1700 UTC<br>Remarks: file: 77123548.txt Contr: (HS)                                                                |
| 17435.0 | V02a | Mode: AM Date/time: Fri 7-12-2007, 1700 UTC<br>Remarks: ..... 74180 34684 Joined in progress, 1st recipient presumed 89361. Repeat of 16 Contr: (MD) |
| 17436.0 | V02a | Mode: AM Date/time: Sun 9-12-2007, 1700 UTC<br>Remarks: 72252 07384 56233 Contr: (DM)                                                                |
| 17436.0 | V02a | Mode: AM Date/time: Sun 30-12-2007, 1700 UTC<br>Remarks: Contr: (EC)                                                                                 |
| 17463   | X06  | Mode: AM Date/time: 31-12-2007, 0902 UTC<br>Remarks: Mazielka. Sequence: 256134 Contr: (RiN)                                                         |
| 17515   | SK01 | Mode: RDFT Date/time: 17-12-2007, 1603 UTC<br>Remarks: Text files Contr: (N2UHC)                                                                     |
| 17515   | V02a | Mode: AM Date/time: 23-12-2007, 1613 UTC<br>Remarks: YL/SS w/ 5F msgs Contr: (N2UHC)                                                                 |
| 17515   | V02a | Mode: AM Date/time: 24-12-2007, 1600 UTC<br>Remarks: w/ 53891 54037 48875 callup & 5F msgs Contr: (N2UHC)                                            |
| 17515   | V02a | Mode: AM Date/time: 27-12-2007, 1618 UTC<br>Remarks: w/ 5F msgs Contr: (N2UHC)                                                                       |
| 17515   | V02a | Mode: AM Date/time: 28-12-2007, 1600 UTC<br>Remarks: YL/SS w/ 47891 44255 15822 callup & 5F msgs Contr: (N2UHC)                                      |
| 17515.0 | V02a | Mode: AM Date/time: 7-12-2007, 1600 UTC<br>Remarks: 89361 74180 34684 callup & 5F msgs Contr: (N2UHC)                                                |
| 17515.0 | V02a | Mode: AM Date/time: Fri 7-12-2007, 1600 UTC<br>Remarks: 89361 74180 34684 Contr: (MD)                                                                |
| 17515.0 | V02a | Mode: AM Date/time: Sun 30-12-2007, 1600 UTC<br>Remarks: Station received loud and clear. Contr: (EC)                                                |
| 19611   | X06  | Mode: AM Date/time: 31-12-2007, 0905 UTC<br>Remarks: Mazielka. Sequence: 256134 Contr: (RiN)                                                         |
| 20047.7 | MX   | Mode: CW Date/time: 26-12-2007, UTC<br>Remarks: Cluster beacon "D" Contr: (FN)                                                                       |
| 20047.9 | MX   | Mode: CW Date/time: 20-12-2007, UTC<br>Remarks: Cluster beacon "S" Contr: (FN)                                                                       |
| 20048   | MX   | Mode: CW Date/time: 6-12-2007, UTC<br>Remarks: Cluster beacon "C" Contr: (FN)                                                                        |
| 21865   | E03a | Mode: USB Date/time: 24-12-2007, 0741 UTC                                                                                                            |

Remarks: Cherry Ripe Contr: (PBA)

---

\* CONTRIBUTORS \*

|        |                                 |
|--------|---------------------------------|
| AB     | Ary Boender, Netherlands        |
| ALF    | Alf, Germany                    |
| Arne   | Arne, Central Arizona, USA      |
| AVX    | AlphaVax, Germany               |
| BCI    | Bruno Casula, Italy             |
| BG     | Bob Grove, NC, USA              |
| CCA    | Curt, CA, USA                   |
| DL8AAM | DL8AAM, Germany                 |
| DM     | Dan Malloy, MA, USA             |
| DMA    | Dave McAllistar, Canada         |
| EC     | Ed Caron, MA, USA               |
| FN     | Fritz Nusser, Switzerland       |
| HFD    | Hans-Friedrich Dumrese, Germany |
| IARUMS | IARU Monitoring Service         |
| IB     | Igor Buhtiyarov, Russia         |
| Jon-FL | Jon, FL, USA                    |
| JPL-SE | JPL via DX Tuner Sweden         |
| KA3YXM | Sean Breheny, KA3YXM, MA, USA   |
| KC2JXC | Ralph / KC2JXC, NY, USA         |
| KK2    | Kristian K, Central Europe      |
| LDO    | Leif Dehio, Germany             |
| MD     | MD, USA                         |
| MG     | Manolis, Greece                 |
| MPJ    | Jim, W. Europe                  |
| MrDXer | via Rommele, Sweden             |
| MUK    | Mikesndbs, UK                   |
| N2UHC  | N2UHC                           |
| NG     | Norave, Germany                 |
| PBA    | Peter Berrett, Australia        |
| Poglad | Poglad, UK                      |
| PoRus  | Poacher, Russia                 |
| PPA    | Peter Poelstra, Netherlands     |
| RCh    | Robert Church, NY, USA          |
| Red    | RedOctober, PA, USA             |
| RiN    | Richard Ness, UK                |
| Rus    | Ruskington, PA, USA             |
| Rus-SE | Ruskington, Sweden              |
| SAN    | Sancho, ILL, USA                |
| Sferix | Sferix, Taiwan                  |
| SW2    | Sam Wright, UK                  |
| TI     | Tomonori Izumi, Japan           |



|        |                        |
|--------|------------------------|
| TJ     | Trond Jacobsen, Norway |
| VA3SUG | VA3SUG, Canada         |
| Vambo  | Vambo, CO, USA         |
| WA8QFE | WA8QFE, MO, USA        |
| Westli | Westli, CA, USA        |
| WP3    | Wolfgang Palmberger    |

---

## NUMBERS & ODDITIES 2007 INDEX

|         |                                          |     |
|---------|------------------------------------------|-----|
|         |                                          | N&O |
| General | Intelligence profile: Indonesia          | 119 |
| General | Intelligence profile: Kenia              | 120 |
| General | Kiev Woodpecker article                  | 120 |
| General | Knickerbein, X-Ger%t and Y-Ger%t article | 124 |
| Voice   | Chinese Robot                            | 122 |
| Voice   | E03 idents                               | 113 |
| Voice   | E03 idents                               | 115 |
| Voice   | E03 idents                               | 116 |
| Voice   | E03 idents                               | 117 |
| Voice   | E03 idents                               | 119 |
| Voice   | E03 idents                               | 121 |
| Voice   | E03 idents                               | 124 |
| Voice   | E03 idents + message                     | 114 |
| Voice   | E03 idents + message                     | 118 |
| Voice   | E03 idents + message                     | 120 |
| Voice   | E03 idents + message                     | 122 |
| Voice   | E03 idents + message                     | 123 |
| Voice   | E03a idents                              | 122 |
| Voice   | E03a idents                              | 123 |
| Voice   | E03a new schedule                        | 120 |
| Voice   | E03a schedules + message                 | 121 |
| Voice   | E06 message                              | 120 |
| Voice   | E06 message                              | 121 |
| Voice   | E06 message                              | 122 |
| Voice   | E06 test                                 | 123 |
| Voice   | E07 message                              | 114 |
| Voice   | E07 message                              | 116 |
| Voice   | E07 message                              | 119 |
| Voice   | E07 message                              | 120 |
| Voice   | E10                                      | 113 |
| Voice   | E10                                      | 118 |
| Voice   | E10                                      | 119 |
| Voice   | E10                                      | 121 |
| Voice   | E10                                      | 122 |

|       |                                |     |
|-------|--------------------------------|-----|
| Voice | E10                            | 123 |
| Voice | E10                            | 124 |
| Voice | E10 irregulars + message       | 114 |
| Voice | E10 new schedules              | 120 |
| Voice | E10 string                     | 115 |
| Voice | E11 message                    | 117 |
| Voice | E11 message                    | 120 |
| Voice | E11 message                    | 121 |
| Voice | E11 message                    | 122 |
| Voice | E11 message                    | 124 |
| Voice | E17 message                    | 114 |
| Voice | E22                            | 118 |
| Voice | E22                            | 122 |
| Voice | E25                            | 118 |
| Voice | E25 message                    | 114 |
| Voice | E25 messages                   | 113 |
| Voice | Extended Family III log report | 121 |
| Voice | G06 message                    | 114 |
| Voice | G06 message                    | 116 |
| Voice | G11                            | 122 |
| Voice | G11 message                    | 114 |
| Voice | G11 message                    | 121 |
| Voice | M18                            | 121 |
| Voice | M21                            | 121 |
| Voice | M22                            | 121 |
| Voice | M41                            | 121 |
| Voice | M51                            | 121 |
| Voice | M89                            | 121 |
| Voice | MX                             | 121 |
| Voice | S06                            | 122 |
| Voice | S06 message                    | 116 |
| Voice | S06 message                    | 118 |
| Voice | S06 message                    | 120 |
| Voice | S10d disappeared               | 119 |
| Voice | S10d message                   | 114 |
| Voice | S10d message                   | 117 |
| Voice | S11a                           | 121 |
| Voice | S11a message                   | 118 |
| Voice | S11b message                   | 113 |
| Voice | S14                            | 114 |
| Voice | S17c disappeared               | 119 |
| Voice | V02a                           | 114 |
| Voice | V02a new schedule              | 124 |
| Voice | V02a new voice                 | 119 |
| Voice | V02a various reports           | 121 |
| Voice | V07                            | 121 |
| Voice | V13                            | 113 |
| Voice | V13                            | 117 |

|       |                                         |     |
|-------|-----------------------------------------|-----|
| Voice | V13                                     | 118 |
| Voice | V13                                     | 119 |
| Voice | V21                                     | 113 |
| Voice | V21                                     | 114 |
| Voice | V21                                     | 115 |
| Voice | V21                                     | 121 |
| Voice | V21                                     | 123 |
| Voice | V22                                     | 122 |
| Voice | V24                                     | 113 |
| Voice | V25                                     | 119 |
| Voice | V26                                     | 121 |
| Voice | V26 message                             | 122 |
| Voice | V26 message + M89/Chinese military link | 124 |
| Morse | Extended Family III log report          | 121 |
| Morse | M01 messages                            | 119 |
| Morse | M03                                     | 120 |
| Morse | M08a                                    | 118 |
| Morse | M10 disappeared                         | 118 |
| Morse | M10 disappeared                         | 119 |
| Morse | M12 schedules                           | 118 |
| Morse | M12 schedules                           | 120 |
| Morse | M14                                     | 118 |
| Morse | M18                                     | 113 |
| Morse | M21                                     | 114 |
| Morse | M21                                     | 115 |
| Morse | M21                                     | 116 |
| Morse | M21                                     | 117 |
| Morse | M21                                     | 118 |
| Morse | M21                                     | 120 |
| Morse | M21                                     | 122 |
| Morse | M21                                     | 123 |
| Morse | M21                                     | 124 |
| Morse | M21 messages                            | 119 |
| Morse | M21 tracks + variant                    | 113 |
| Morse | M22                                     | 113 |
| Morse | M22                                     | 114 |
| Morse | M22                                     | 115 |
| Morse | M22                                     | 116 |
| Morse | M22                                     | 117 |
| Morse | M22                                     | 119 |
| Morse | M22                                     | 120 |
| Morse | M22 odd frequencies                     | 124 |
| Morse | M23                                     | 115 |
| Morse | M24 message                             | 116 |
| Morse | M41                                     | 123 |
| Morse | M41 tracks                              | 113 |
| Morse | M51                                     | 113 |

|               |                                              |     |
|---------------|----------------------------------------------|-----|
| Morse         | M51                                          | 114 |
| Morse         | M51                                          | 115 |
| Morse         | M51                                          | 116 |
| Morse         | M51                                          | 117 |
| Morse         | M51                                          | 118 |
| Morse         | M51                                          | 119 |
| Morse         | M51                                          | 120 |
| Morse         | M51/FAV22/F9TM background info + messages    | 123 |
| Morse         | M51/FAV22/F9TM messages                      | 122 |
| Morse         | M51/FAV22/F9TM schedules                     | 124 |
| Morse         | M62                                          | 114 |
| Morse         | M62                                          | 115 |
| Morse         | M62                                          | 118 |
| Morse         | M62 messages                                 | 113 |
| Morse         | M82 message                                  | 119 |
| Morse         | M89                                          | 113 |
| Morse         | M89                                          | 115 |
| Morse         | M89                                          | 116 |
| Morse         | M89                                          | 117 |
| Morse         | M89                                          | 118 |
| Morse         | M89                                          | 119 |
| Morse         | M89                                          | 120 |
| Morse         | M89                                          | 122 |
| Morse         | M89                                          | 123 |
| Morse         | M89                                          | 124 |
| Morse         | M89 message                                  | 114 |
| Morse         | MX                                           | 113 |
| Morse         | MX                                           | 114 |
| Morse         | MX                                           | 115 |
| Morse         | MX                                           | 116 |
| Morse         | MX                                           | 117 |
| Morse         | MX                                           | 118 |
| Morse         | MX                                           | 119 |
| Morse         | MX                                           | 120 |
| Morse         | MX                                           | 122 |
| Morse         | MX                                           | 124 |
| Morse         | MX new freq for "V" and "P" on 420 + 583 kHz | 123 |
| Various modes | M42                                          | 113 |
| Various modes | M42                                          | 114 |
| Various modes | M42                                          | 116 |
| Various modes | M42                                          | 117 |
| Various modes | M42                                          | 118 |
| Various modes | M42                                          | 119 |
| Various modes | M42                                          | 120 |
| Various modes | M42                                          | 122 |
| Various modes | M42                                          | 123 |
| Various modes | M42 + message                                | 124 |

|               |                                                        |     |
|---------------|--------------------------------------------------------|-----|
| Various modes | S28                                                    | 122 |
| Various modes | S28 on various frequencies                             | 118 |
| Various modes | S28 on various frequencies                             | 121 |
| Various modes | SK01 PSK31 (various modulations)                       | 115 |
| Various modes | SK01 PSK31 (various modulations)                       | 116 |
| Various modes | SK01 PSK31 (various modulations)                       | 118 |
| Various modes | SK01 PSK31 (various modulations)                       | 119 |
| Various modes | SK01 PSK31 (various modulations) + messages            | 113 |
| Various modes | SK01 PSK31 (various modulations) + messages            | 117 |
| Various modes | SK01 RDFT & PSK31 + messages                           | 124 |
| Various modes | SK01 RDFT, DRM, PSK31 (various modulations) + messages | 121 |
| Various modes | SK01 RDFT, DRM, PSK31 (various modulations) + messages | 122 |
| Various modes | SK01 RDFT, DRM, PSK31 (various modulations) + messages | 123 |
| Various modes | X06                                                    | 113 |
| Various modes | X06                                                    | 114 |
| Various modes | X06                                                    | 115 |
| Various modes | X06                                                    | 116 |
| Various modes | X06                                                    | 117 |
| Various modes | X06                                                    | 118 |
| Various modes | X06                                                    | 119 |
| Various modes | X06                                                    | 120 |
| Various modes | X06                                                    | 122 |
| Various modes | X06                                                    | 123 |
| Various modes | X06                                                    | 124 |
| Various modes | XPA changes                                            | 115 |
| Various modes | XSL                                                    | 113 |
| Various modes | XSL                                                    | 121 |
| Military      | M32 + other CIS/Russian/Ukraine stations               | 113 |
| Military      | M32 + other CIS/Russian/Ukraine stations               | 114 |
| Military      | M32 + other CIS/Russian/Ukraine stations               | 115 |
| Military      | M32 + other CIS/Russian/Ukraine stations               | 116 |
| Military      | M32 + other CIS/Russian/Ukraine stations               | 117 |
| Military      | M32 + other CIS/Russian/Ukraine stations               | 118 |
| Military      | M32 + other CIS/Russian/Ukraine stations               | 119 |
| Military      | M32 + other CIS/Russian/Ukraine stations               | 120 |
| Military      | M32 + other CIS/Russian/Ukraine stations               | 121 |
| Military      | M32 + other CIS/Russian/Ukraine stations               | 122 |
| Military      | M32 + other CIS/Russian/Ukraine stations               | 123 |
| Military      | M32 + other CIS/Russian/Ukraine stations               | 124 |
| Utility       | Clandestine Activity Survey                            | 124 |
| Utility       | Driftnet beacons                                       | 117 |
| Utility       | Driftnet beacons                                       | 118 |
| Utility       | Driftnet beacons                                       | 119 |
| Utility       | Driftnet beacons                                       | 120 |
| Utility       | Jammers                                                | 117 |
| Utility       | Mystery "f" station                                    | 114 |

|         |                                                      |     |
|---------|------------------------------------------------------|-----|
| Utility | Mystery "f" station                                  | 115 |
| Utility | Pirate beacons                                       | 113 |
| Utility | Pirate beacons                                       | 114 |
| Utility | Pirate beacons                                       | 118 |
| Utility | Pirate beacons                                       | 119 |
| Utility | Pirate beacons                                       | 120 |
| Utility | Pirate beacons                                       | 122 |
| Utility | Pirate beacons                                       | 123 |
| Utility | Pirate beacons                                       | 124 |
| Utility | Pirate beacons - overview                            | 121 |
| Utility | Pirate stations                                      | 118 |
| Utility | Timesignals (MIKES)                                  | 119 |
| Utility | Turkish numbers                                      | 114 |
| Utility | Unid CW station 3549.8 kHz: 5 character groups       | 117 |
| Utility | Unid CW station 3549.8 kHz: 5 character groups       | 118 |
| Utility | Unid CW station 5024 kHz: 3, 4 & 5FGs                | 113 |
| Utility | Unid CW station 5065 kHz: NATO training?             | 113 |
| Utility | Unid CW station 5483 kHz: 5FGs                       | 114 |
| Utility | Unid CW station 6220 kHz: 5 & 6FGs                   | 121 |
| Utility | Unid CW station 6651 kHz: 3FGs                       | 119 |
| Utility | Unid CW station 6817 kHz: D5TV                       | 118 |
| Utility | Unid CW station 6855 kHz: M5VZ                       | 118 |
| Utility | Unid CW station 6898 kHz: 3FGs                       | 118 |
| Utility | Unid CW station 6996 kHz: CUT001C                    | 123 |
| Utility | Unid CW station 6998.5 kHz: Russian?                 | 122 |
| Utility | Unid CW station 7587 kHz: 5FGs                       | 114 |
| Utility | Unid CW station 9067 kHz: non-stop letters           | 114 |
| Utility | Unid CW station 9140 kHz: 5LGs                       | 118 |
| Utility | Unid CW station 9296 kHz (= M41)                     | 120 |
| Utility | Unid CW station 9361 kHz: 5FGs                       | 117 |
| Utility | Unid CW station 10421 kHz: dot + "U"                 | 119 |
| Utility | Unid CW station 12248 kHz: RN8                       | 118 |
| Utility | Unid CW station 14344 kHz: VVV testing               | 119 |
| Utility | Unid CW station 3LGs net                             | 115 |
| Utility | Unid CW station Chinese "H" beacon on 8580 kHz       | 117 |
| Utility | Unid CW station FRA-net on 4536 kHz                  | 116 |
| Utility | Unid dash on 6878 kHz                                | 124 |
| Utility | Unid voice station 8150 kHz: Station 34 (in Spanish) | 119 |
| Utility | Unid voice station 8200 khz: Arab conversations      | 119 |
| Utility | Unid voice station 8230 kHz: Arab conversations      | 119 |
| Utility | Unid voice station 14753 kHz: English 5FGs           | 121 |
| Utility | Unid voice station 16303 kHz: 110001                 | 121 |
| Utility | XX7 propagation tester                               | 120 |
| Logs    | Logs                                                 | 113 |
| Logs    | Logs                                                 | 114 |
| Logs    | Logs                                                 | 115 |
| Logs    | Logs                                                 | 116 |

|      |      |     |
|------|------|-----|
| Logs | Logs | 117 |
| Logs | Logs | 118 |
| Logs | Logs | 119 |
| Logs | Logs | 120 |
| Logs | Logs | 121 |
| Logs | Logs | 122 |
| Logs | Logs | 123 |
| Logs | Logs | 124 |

---

If you wish to be fully credited with your logs and/or information please let me know, otherwise I will only mention your initials or first name.

Portions of this newsletter may be used in electronic or printed hobby bulletins without prior approval so long as "Numbers & Oddities" is credited as the source. This newsletter may NOT be utilized, partly or wholly, in any other COMMERCIAL media format without the written permission of the Editor. Any breach of this may result in action under international copyright legislation.

Relevant mailing lists:

- Utility DXers Forum (utility and spooks related logs).  
Go to <http://groups.yahoo.com/group/udxf/> and follow the instructions.  
Website: <http://www.udxf.nl>
- Spooks (spooks related info and logs)  
Go to the web interface to subscribe, fill in the form and follow the instructions that will be mailed to you.  
<http://mailman.qth.net/mailman/listinfo/spooks>

-0-0-0-0-KONEC-0-0-0-0-